

Printed 02/26/2001

APPLICATION NUMBER	FILING DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET N
09/576,960	05/24/2000	435	1641	1670-0226

APPLICANT  
DAVID W PIPES, CHESTERFIELD, MISSOURI; MARY E DYSZLEWSKI, CREVE COEUR,  
MISSOURI; ELIZABETH G WEBB, ST. CHARLES, MISSOURI.

\*\*CONTINUING DOMESTIC DATA\*\*\*\*\*  
VERIFIED

\_\_\_\_\_

\*\*371 (NAT'L STAGE) DATA\*\*\*\*\*  
VERIFIED

\_\_\_\_\_

\*\*FOREIGN APPLICATIONS\*\*\*\*\*  
VERIFIED

\_\_\_\_\_

Foreign priority claimed 35 USC 119 (a-d) conditions met	O yes O no O yes O no O Met after Allowance	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDE CLAIMS
Verified and acknowledged	_____	MO	0	32	2
Examiner's Name Initials					

ADDRESS  
ROTHWELL FIGG ERNST & MANBECK PC  
SUITE 701 E  
555 13TH STREET NW  
WASHINGTON , DC 20004

TITLE  
FORMULATION OF TC AND RE CARBONYL COMPLEXES USING STANNOUS ION AS THE  
REDUCTANT FOR PERTECHNETATE AND PERRHENATE

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: MOLLY CEPERLEY Examiner #: 54787 Date: 2/24/94  
 Art Unit: 1641 Phone Number 303-4239 Serial Number: 44576-950 - 10/053, 62  
 Mail Box and Bldg/Room Location: SMI-8D15 Results Format Preferred (circle) PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: \_\_\_\_\_

Inventors (please provide full names): See attached bibliographic data sheet.

Earliest Priority Filing Date: \_\_\_\_\_

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search for the following separately:

- ① Preparation of the compounds of claim 1 and claim 3.  
 Terms: facial metal tricarboxylate,  $M^{n+}$ ,  $Re$ ,  $Re$ , permetalate,  
 carbon monoxide, stannous, ligand
- ② Stannous ion (claim 18) Prefer hydrolyzed with or without carbon monoxide. See claim 22 for stannous compounds. Please search broadly for all of these. See also, claim 27.

Further terms:

Tc-carboxyl complexes

perchlorate ( $TCO_4^-$ )

Stannous chloride

ligand (monodentate, bidentate, tridentate)

tricarboxylate

DTPA

EDTA

IDA

NDA

triazacyclononane triacetate

reducing agent

facial metal-carboxyl

Point of Contact:  
 Susan Hanley  
 Technical Info. Specialist  
 CM1 12C14 Tel: 305-4053

## STAFF USE ONLY

Searcher: Hanley

Searcher Phone #: \_\_\_\_\_

Searcher Location: \_\_\_\_\_

Date Searcher Picked Up: 2/8

Date Completed: 3/13

Searcher Prep & Review Time: \_\_\_\_\_

Clerical Prep Time: \_\_\_\_\_

Online Time: \_\_\_\_\_

## Type of Search

NA Sequence (#) \_\_\_\_\_

AA Sequence (#) \_\_\_\_\_

Structure (#) \_\_\_\_\_

Bibliographic \_\_\_\_\_

Litigation \_\_\_\_\_

Fulltext \_\_\_\_\_

Patent Family \_\_\_\_\_

Other \_\_\_\_\_

## Vendors and cost where applicable

STN \_\_\_\_\_

Dialog \_\_\_\_\_

Questel/Orbit \_\_\_\_\_

Dr.Link \_\_\_\_\_

Lexis/Nexis \_\_\_\_\_

Sequence Systems \_\_\_\_\_

WWW/Internet \_\_\_\_\_

Other (specify) \_\_\_\_\_

=&gt; d bib abs hitstr 126 1

L26 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2001 ACS  
 AN 2001:12467 HCAPLUS  
 DN 134:91106  
 TI Group (VII) transition-metal complexes with multidentate aminopolycarboxylate ligands and a kit for producing them  
 IN Dyszlewski, Mary M.; Alberto, Roger; Bugaj, Joseph E.  
 PA Mallinckrodt Inc., USA  
 SO PCT Int. Appl., 34 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

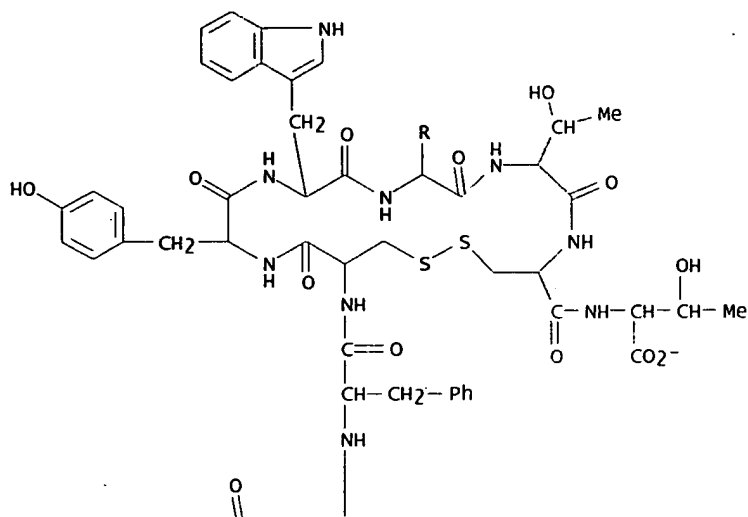
*Considered -*  
*06/29/01*  
*MEC*

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001000637	A1	20010104	WO 2000-US17813	20000628
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
PRAI	US 1999-140989		19990629		
AB	The invention relates to novel aminocarboxylate ligands that are suitable for complexing with a radionuclide, and are useful as imaging agents for diagnostic purposes. In accordance with the present invention, a method of prepg. a compd. of formula (I): fac-[M(CO)3(OH2)3]+, wherein M is Mn, 99mTc, 186Re or 188Re, involves reacting a metal in permetallate form with carbon monoxide and a reducing agent, wherein a mixt. of a basic borate buffer and a reducing agent sol. in water but not substantially decompd. by water is solved in a water contg. solvent system contg. a soln. of the metal in permanganate, pertechnetate or perrhenate form in the presence of carbon monoxide. The compd. of formula (I) can be reacted with a ligand Lx to form a compd. of formula (II): fac-[M(CO)3(X)2L1]n, wherein M is as defined above, Lx is a multidentate ligand, and n is a charge of the ligand Lx increased with one + charge. The invention also is directed to novel compds., and kits for carrying out the disclosed methods.				
IT	14133-76-7DP, Technetium 99, complexes with aminocarboxylate ligands, biological studies 317322-35-3DP, technetium-99 complex 317322-38-6DP, technetium-99 complex RL: BPR (Biological process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses) (radiopharmaceutical kit for prepg. technetium 99m scintigraphic agents)				
RN	14133-76-7 HCAPLUS				
CN	Technetium, isotope of mass 99 (8CI, 9CI) (CA INDEX NAME)				

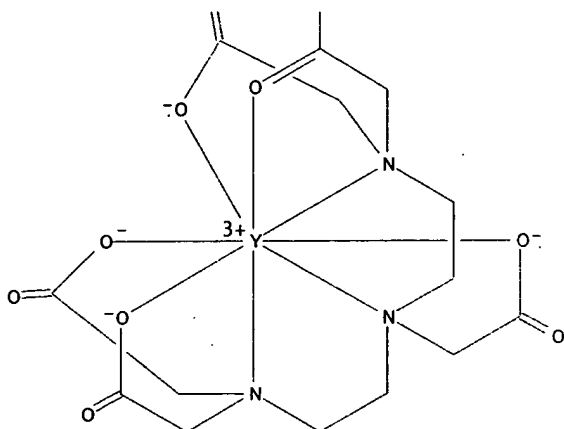
99Tc

RN 317322-35-3 HCAPLUS  
 CN Yttrate(2-), [N-[2-[[2-[bis[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl][[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl]-N-[(carboxy-.kappa.O)methyl]glycyl-.kappa.N,.kappa.O-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl-L-threonine cyclic (3.fwdarw.8)-disulfidato(5-)]-, dihydrogen (9CI) (CA INDEX NAME)

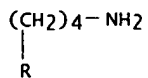
PAGE 1-A



PAGE 2-A



PAGE 3-A



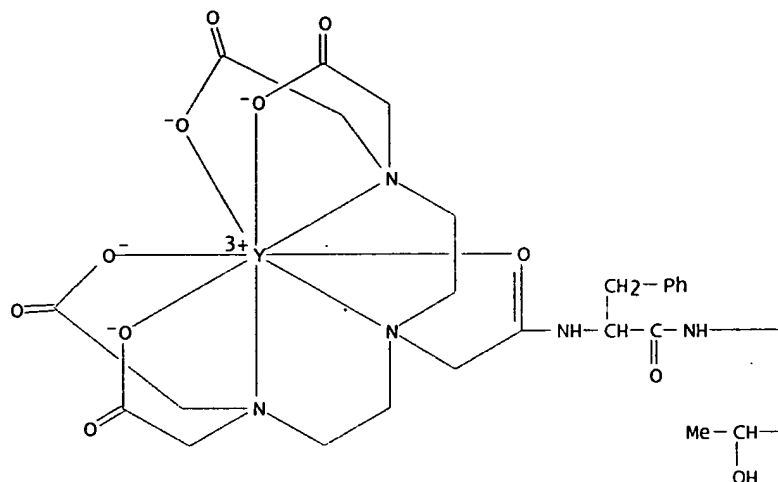
● 2 H<sup>+</sup>

RN 317322-38-6 HCAPLUS  
CN Yttrate(2-), [N,N-bis[2-[bis[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl]glycyl-.kappa.N,.kappa.O-D-phenylalanyl-L-cysteiny-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteiny-L-threonine cyclic (3.fwdarw.8)-disulfidato(5-)]-, dihydrogen (9CI) (CA INDEX NAME)

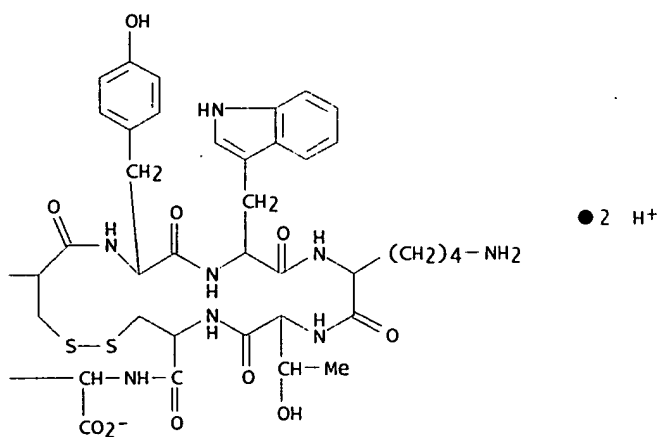
SEARCHED BY SUSAN HANLEY 305-4053

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PAGE 1-A



PAGE 1-B



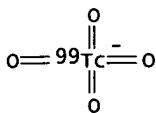
IT 23288-61-1 317321-95-2 317322-35-3  
317322-38-6

RL: RCT (Reactant)

(radiopharmaceutical kit for prepg. technetium 99m  
scintigraphic agents)

RN 23288-61-1 HCAPLUS

CN Technetate (99TcO41-), (T-4)- (9CI) (CA INDEX NAME)



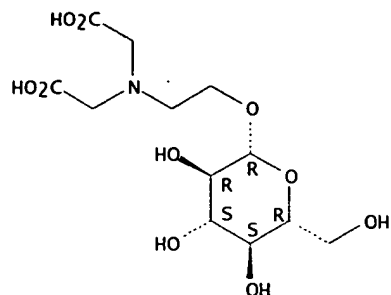
RN 317321-95-2 HCAPLUS

CN Glycine, N-(carboxymethyl)-N-[2-(.beta.-D-glucopyranosyloxy)ethyl]- (9CI)  
(CA INDEX NAME)

SEARCHED BY SUSAN HANLEY 305-4053

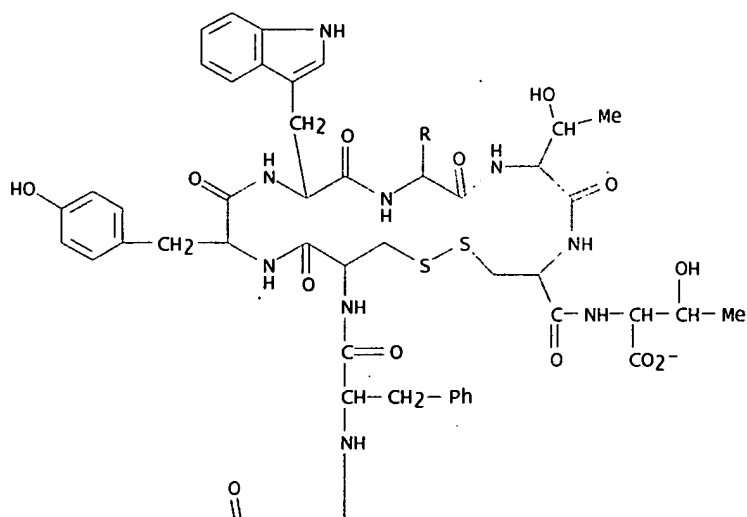
Page 3

Absolute stereochemistry.

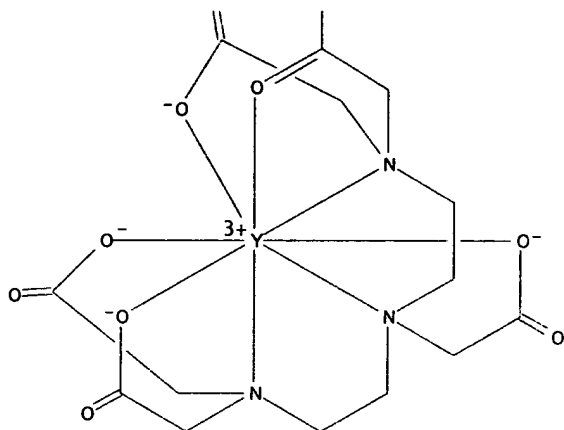


RN 317322-35-3 HCAPLUS  
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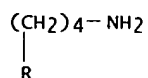
PAGE 1-A



PAGE 2-A



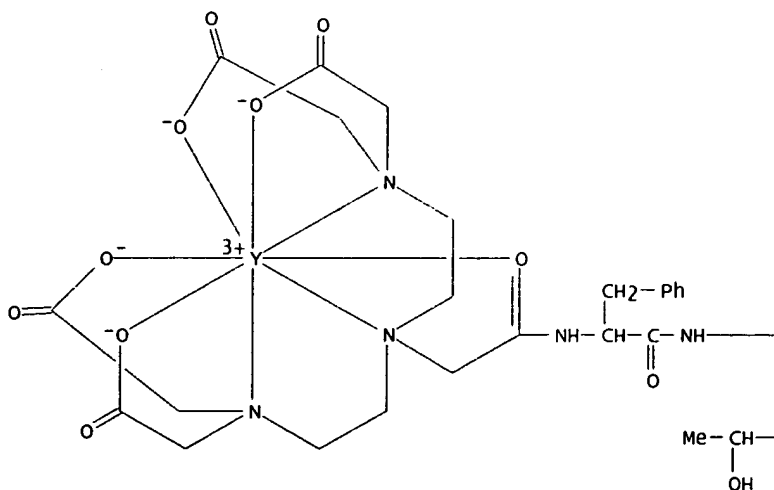
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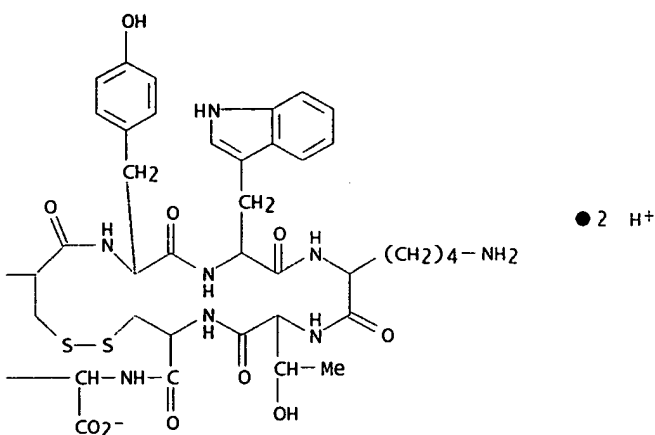


● 2 H<sup>+</sup>

RN 317322-38-6 HCAPLUS  
CN Yttrate(2-), [N,N-bis[2-[bis[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl]glycyl-.kappa.N,.kappa.O-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl-L-threonine cyclic (3.fwdarw.8)-disulfidato(5-)]-, dihydrogen (9CI) (CA INDEX NAME)

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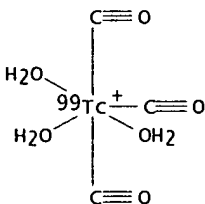


IT 163932-31-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(radiopharmaceutical kit for prepg. technetium 99m  
scintigraphic agents)

RN 163932-31-8 HCAPLUS

CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX  
NAME)



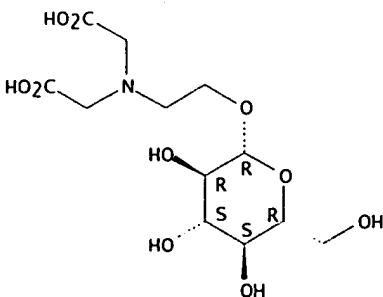
IT 317321-95-2DP, technetium complex

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological  
study); PREP (Preparation); USES (Uses)  
(radiopharmaceutical kit for prepg. technetium 99m  
scintigraphic agents)

RN 317321-95-2 HCAPLUS

CN Glycine, N-(carboxymethyl)-N-[2-(.beta.-D-glucopyranosyloxy)ethyl]- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.



IT 317321-96-3D, technetium-99 complex

RL: BPR (Biological process); THU (Therapeutic use); BIOL (Biological

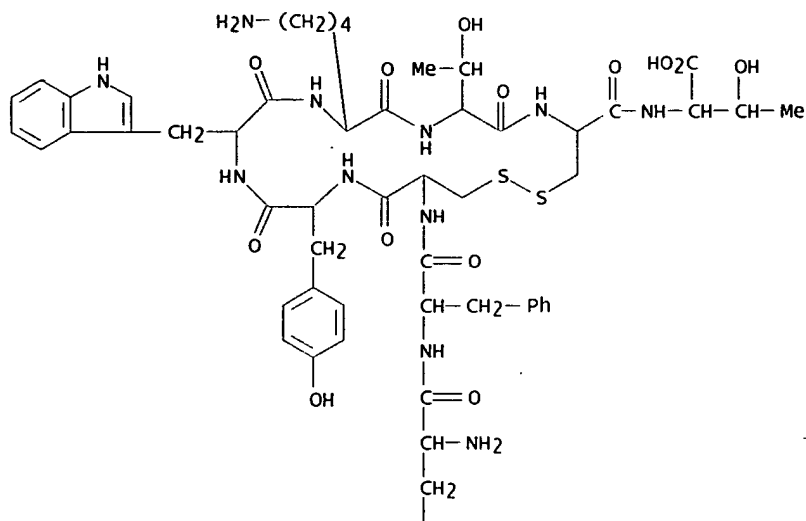
SEARCHED BY SUSAN HANLEY 305-4053



study); PROC (Process); USES (Uses)  
 (radiopharmaceutical) kit for prepg. technetium 99m  
 scintigraphic agents for somatostatin-pos. tissues)

RN 317321-96-3 HCAPLUS  
 CN L-Threonine, D-histidyl-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-  
 L-lysyl-L-threonyl-L-cysteinyl-, cyclic (3.fwdarw.8)-disulfide (9CI) (CA  
 INDEX NAME)

PAGE 1-A

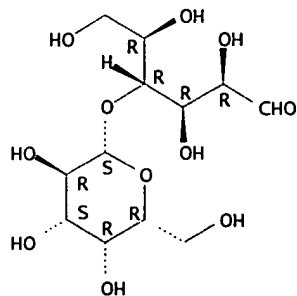


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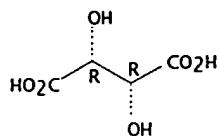
IT 63-42-3, Lactose 87-69-4, L-Tartaric acid  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (radiopharmaceutical kits for prepg. imaging agents)  
 RN 63-42-3 HCAPLUS  
 CN D-Glucose, 4-O-.beta.-D-galactopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 87-69-4 HCAPLUS  
 CN Butanedioic acid, 2,3-dihydroxy- (2R,3R)- (9CI) (CA INDEX NAME)

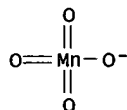
Absolute stereochemistry.



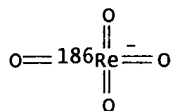
IT 630-08-0, Carbon monoxide, reactions 14333-13-2,  
 Permanganate 87552-16-7, Rhenate (186ReO41-), (T-4)-  
 122123-28-8, Rhenate (188ReO41-), (T-4)-  
 RL: RCT (Reactant)  
 (radiopharmaceutical kits for prepg. imaging agents)  
 RN 630-08-0 HCAPLUS  
 CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



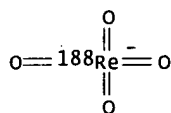
RN 14333-13-2 HCAPLUS  
 CN Permanganate (MnO41-) (8CI, 9CI) (CA INDEX NAME)



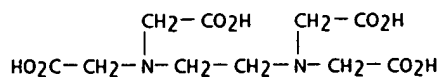
RN 87552-16-7 HCAPLUS  
 CN Rhenate (186ReO41-), (T-4)- (9CI) (CA INDEX NAME)



RN 122123-28-8 HCAPLUS  
 CN Rhenate (188ReO41-), (T-4)- (9CI) (CA INDEX NAME)

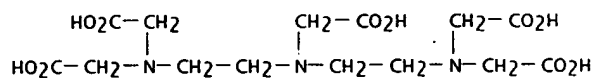


IT 60-00-4D, EDTA, complexes with radionuclides  
 67-43-6D, DTPA, complexes with radionuclides  
 139-13-9D, Nitritotriacetic acid, complexes with  
 radionuclides 142-73-4D, IDA, complexes with  
 radionuclides 7439-96-5D, Manganese, complexes  
 with aminocarboxylate ligands 14378-26-8D, Rhenium  
 188, complexes with aminocarboxylate ligands, biological studies  
 14998-63-1D, Rhenium 186, complexes with  
 aminocarboxylate ligands, biological studies 56491-86-2D,  
 complexes with radionuclides 60239-18-1D, DOTA,  
 complexes with radionuclides  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (radiopharmaceutical kits for prepg. imaging agents)  
 RN 60-00-4 HCAPLUS  
 CN Glycine, N,N'-1,2-ethanediybis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)

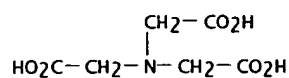


RN 67-43-6 HCAPLUS  
 CN Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]- (7CI, 8CI, 9CI) (CA INDEX NAME)

INDEX NAME)



RN 139-13-9 HCAPLUS  
CN Glycine, N,N-bis(carboxymethyl)- (9CI) (CA INDEX NAME)



RN 142-73-4 HCAPLUS  
CN Glycine, N-(carboxymethyl)- (9CI) (CA INDEX NAME)



RN 7439-96-5 HCAPLUS  
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

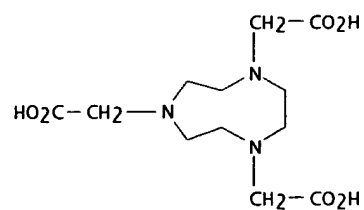
RN 14378-26-8 HCAPLUS  
CN Rhenium, isotope of mass 188 (8CI, 9CI) (CA INDEX NAME)

188Re

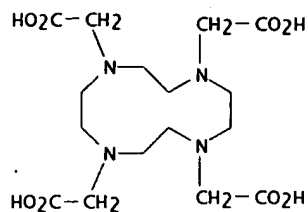
RN 14998-63-1 HCAPLUS  
CN Rhenium, isotope of mass 186 (8CI, 9CI) (CA INDEX NAME)

186Re

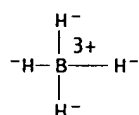
RN 56491-86-2 HCAPLUS  
CN 1H-1,4,7-Triazonine-1,4,7-triacetic acid, hexahydro- (9CI) (CA INDEX NAME)



RN 60239-18-1 HCAPLUS  
CN 1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraacetic acid (9CI) (CA INDEX NAME)

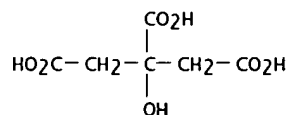


IT 13762-51-1, Potassium tetrahydroborate  
 RL: RCT (Reactant)  
 (reducing agents; radiopharmaceutical kits for prepg. imaging agents)  
 RN 13762-51-1 HCAPLUS  
 CN Borate(1-), tetrahydro-, potassium (8CI, 9CI) (CA INDEX NAME)



● K<sup>+</sup>

IT 68-04-2, Sodium citrate 141-53-7, Sodium formate  
 304-59-6, Potassium sodium tartrate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (stabilizing agent; radiopharmaceutical kit for prepg.  
 technetium 99m scintigraphic agents)  
 RN 68-04-2 HCAPLUS  
 CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, trisodium salt (9CI) (CA  
 INDEX NAME)



● 3 Na

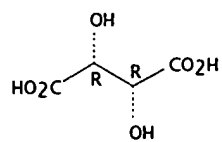
RN 141-53-7 HCAPLUS  
 CN Formic acid, sodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

RN 304-59-6 HCAPLUS  
 CN Butanedioic acid, 2,3-dihydroxy- (2R,3R)-, monopotassium monosodium salt  
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● K

● Na

RE.CNT 4

RE

- (1) Alberto, R; J Am Chem Soc 1998, V120(31), P7987 HCAPLUS
- (2) Alberto, R; J Organomet Chem 1995, V493(1-2), P119 HCAPLUS
- (3) Roger A; WO 9848848 A 1998 HCAPLUS
- (4) Schering AG; EP 1013642 A 2000 HCAPLUS

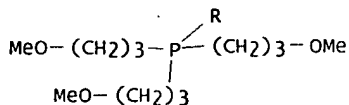
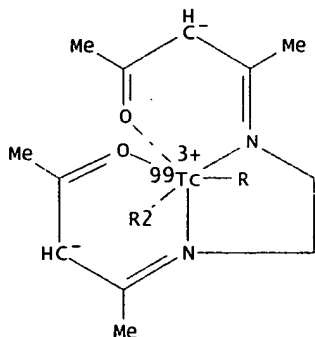
=&gt; d bib abs hitstr 126 2

L26 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1998:75472 HCAPLUS  
 DN 128:189933  
 TI Novel technetium (III)-Q complexes for functional  
 imaging of multidrug resistance (MDR1) P-glycoprotein  
 AU Crankshaw, Carolyn L.; Marmion, Mary; Luker, Gary D.; Rao, Vallabhaneni;  
 Dahlheimer, Julie; Burleigh, B. Daniel; Webb, Elizabeth;  
 Deutsch, Karen F.; Piwnica-Worms, David  
 CS Laboratory of Molecular Radiopharmacology, Mallinckrodt Institute of  
 Radiology, Washington University Medical School, St. Louis, MO, 63110, USA  
 SO J. Nucl. Med. (1998), 39(1), 77-86  
 CODEN: JNMEAQ; ISSN: 0161-5505  
 PB Society of Nuclear Medicine  
 DT Journal  
 LA English  
 AB Overexpression of the multidrug resistance (MDR1) P-glycoprotein (Pgp)  
 correlates with cancer chemotherapeutic failure. Lipophilic cationic  
 radiopharmaceuticals such as 99mTc-sestamibi, 99mTc-tetrofosmin and  
 99mTc-furifosmin (Tc-Q12) have been validated as transport substrates for  
 the MDR1 Pgp and may enable functional imaging of the MDR phenotype in  
 cancer by observing enhanced washout rates of the tracers in those tumor  
 areas expressing Pgp. To further explore and optimize the Pgp recognition  
 properties of Schiff base phosphine mixed-ligand complexes of  
 the Tc-Q series of nonreducible (Tc(III) cations, a variety of Tc-Q  
 complexes were synthesized and tested in vitro for recognition as  
 transport substrates by the human MDR1 Pgp. Tracer assays with human  
 drug-sensitive KB-3-1 epidermal carcinoma and MDR KB-8-5 cells expressing  
 nonimmunodetectable and modest levels of MDR1 Pgp, resp., were used to  
 screen and pharmacol. characterize 37 novel 99mTc-Q analogs. The ideal  
 agent should have low nonspecific binding, high distinction in net uptake  
 between drug-sensitive cells and MDR tumor cells, and high enhancement of  
 uptake in resistant cells after treatment with an MDR modulator,  
 indicating selective blockade of Pgp-mediated efflux of the radiotracer.  
 Three analogs, trans-[5,5'-(1,2-ethanediyl-diimino) bis(2-OEt-2-Me-4-penten-  
 3-one)]bis[dimethyl(3-OMe-1-propyl) phosphine]99mTc(III) (99mTc-Q63) and  
 two trans-[bis(methyl-bis(3-OMe-1-propyl)phosphine)] analogs (99mTc-Q57  
 and 99mTc-Q58) displayed transport distinctions between drug-sensitive and  
 MDR cell lines that were equal to or greater than all previously available  
 agents. Cyclosporin A, an MDR modulator, had no significant effect in  
 KB-3-1 cells for these 99mTc-complexes but enhanced tracer  
 accumulations in KB-8-5 cells with IC50 values of .apprx.1 .mu.M. In  
 contrast, the non-MDR agents methotrexate and cisplatin had no effect on  
 accumulation of 99mTc-Q complexes and 99mTc-sestamibi in KB-8-5  
 cells. Technetium-99m-Q57, 99mTc-Q58 and 99mTc-Q63 are avid  
 transport substrates recognized by the human MDR1 Pgp, and have enhanced  
 in vitro properties that may enable functional imaging of Pgp in vivo with  
 improved signal-to-noise ratios and tissue contrast compared to currently  
 available agents.  
 IT 14133-76-7DP, Technetium 99, complexes,  
 biological studies 129134-13-OP 143049-63-2P  
 143049-65-4P 144029-16-3P 144125-31-5P  
 174529-19-2P 174529-31-8P 203566-00-1P  
 203566-01-2P 203566-02-3P 203566-03-4P  
 203566-04-5P 203566-05-6P 203566-07-8P  
 203566-08-9P 203566-09-0P 203566-10-3P  
 203566-11-4P 203566-12-5P 203566-13-6P  
 203566-14-7P 203566-15-8P 203566-16-9P  
 203566-17-0P 203566-18-1P 203566-19-2P  
 203566-20-5P 203566-21-6P 203566-22-7P  
 203566-23-8P 203566-24-9P 203566-25-0P  
 203566-26-1P 203566-27-2P 203566-28-3P  
 203566-29-4P 203566-30-7P  
 RL: BPR (Biological process); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC  
 (Process); USES (Uses)  
 (technetium 99m complexes for functional imaging of  
 multidrug resistance P-glycoprotein)  
 RN 14133-76-7 HCAPLUS  
 CN Technetium, isotope of mass 99 (8CI, 9CI) (CA INDEX NAME)

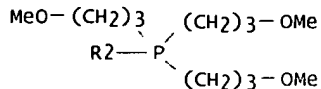
99Tc

RN 129134-13-0 HCAPLUS  
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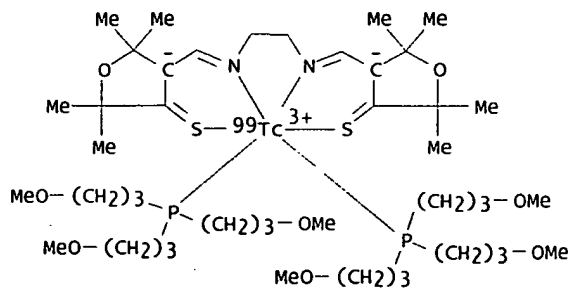
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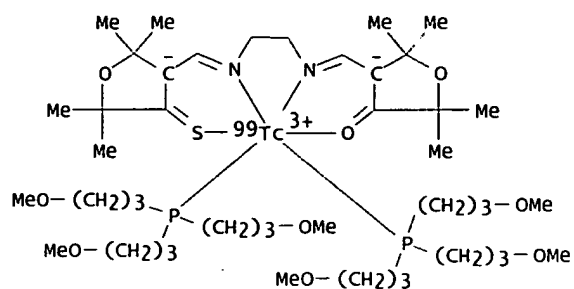
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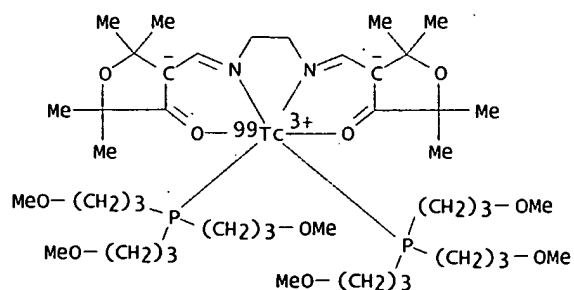
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RN 143049-65-4 HCAPLUS  
 CN Technetium(1+)-99Tc, [dihydro-2,2,5,5-tetramethyl-4-[[[2-[[[tetrahydro-2,2,5,5-tetramethyl-4-(thio-.kappa.S)-3-furanyl]methylene]amino-.kappa.N]ethyl]imino-.kappa.N]methyl]-3(2H)-furanonato(2-)-.kappa.O3]]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-52)- (9CI) (CA INDEX NAME)

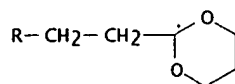
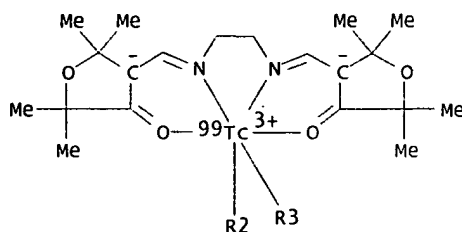


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 .kappa.O3]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)-  
 (9CI) (CA INDEX NAME)



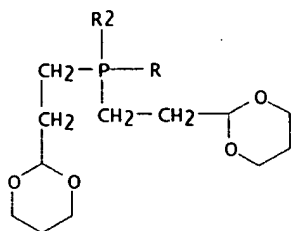
RN 144125-31-5 HCAPLUS  
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 .kappa.O3]](2-)]bis[tris[2-(1,3-dioxan-2-yl)ethyl]phosphine-.kappa.P]-,  
 (OC-6-13)- (9CI) (CA INDEX NAME)

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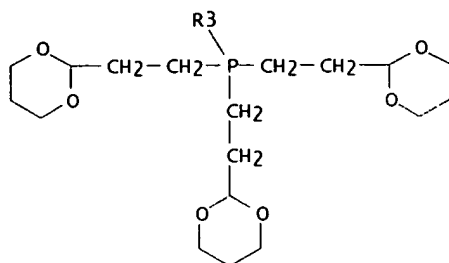




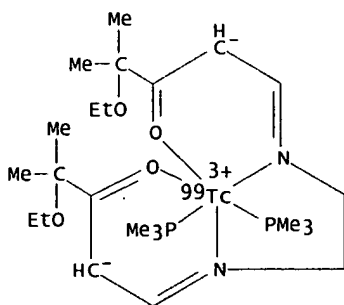
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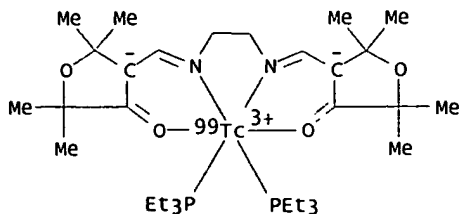
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RN 174529-19-2 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4,15,15-tetramethyl-3,16-dioxa-8,11-diazaoctadeca-7,11-diene-5,14-dionato(2-)-.kappa.N8,.kappa.N11,.kappa.O5,.kappa.O14]bis(trimethylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)

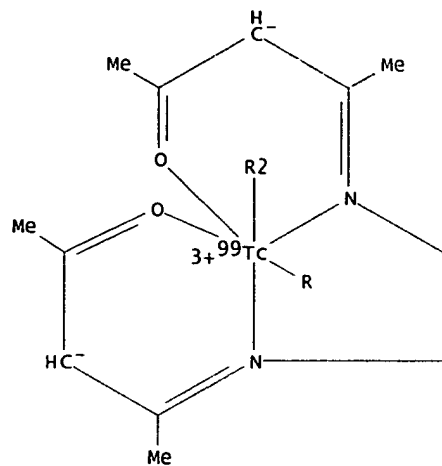


RN 174529-31-8 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis(triethylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)

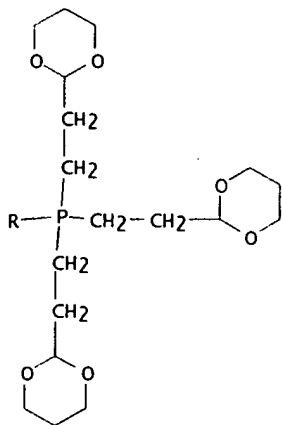


RN 203566-00-1 HCAPLUS  
 CN Technetium(1+)-99Tc, [[3,3'-[1,2-ethanediylbis[(nitrilo-.kappa.N)]bis[2-pentanonato-.kappa.O]](2-)]bis[tris[2-(1,3-dioxan-2-yl)ethyl]phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

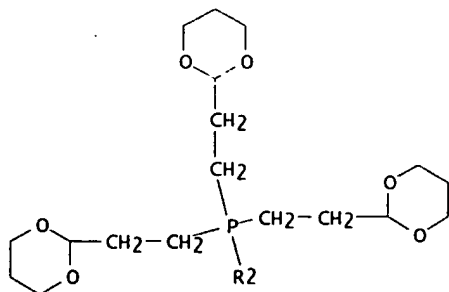
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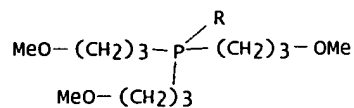
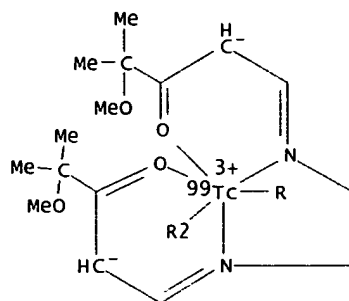


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CN Technetium(1+)-99Tc, [3,3,14,14-tetramethyl-2,15-dioxo-7,10-diazahexadeca-6,10-diene-4,13-dionato(2-)-.kappa.N7,.kappa.N10,.kappa.O4,.kappa.O13]bis[

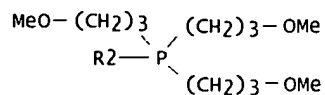
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tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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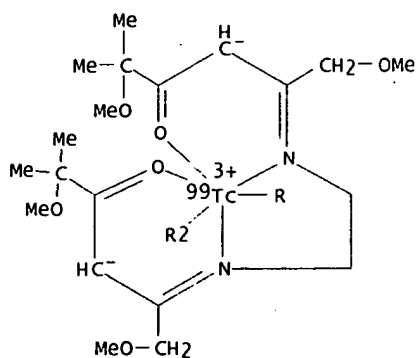


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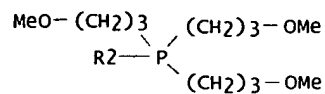
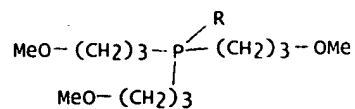


RN 203566-02-3 HCAPLUS  
 CN Technetium(1+)-99Tc, [6,11-bis(methoxymethyl)-3,3,14,14-tetramethyl-2,15-dioxa-7,10-diazahexadeca-6,10-diene-4,13-dionato(2-)-.kappa.N7,.kappa.N10,.kappa.O4,.kappa.O13]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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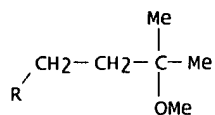
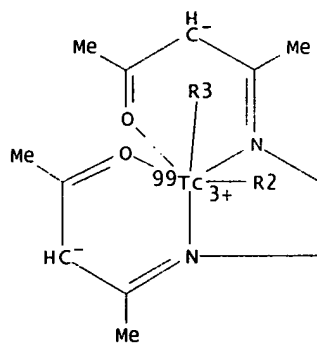


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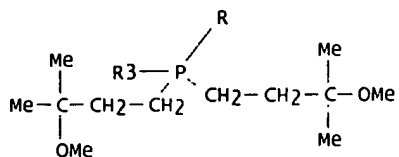
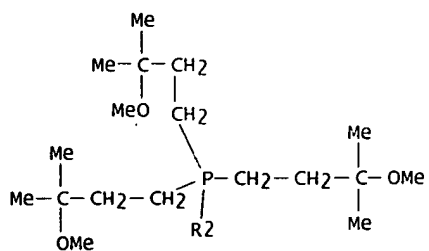


RN 203566-03-4 HCAPLUS  
 CN Technetium(1+)-99Tc, [[3,3'-[1,2-ethanediyl]di(nitrilo-.kappa.N)]bis[2-pentanonato-.kappa.O]](2-)]bis[tris(3-methoxy-3-methylbutyl)phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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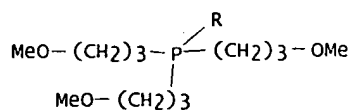
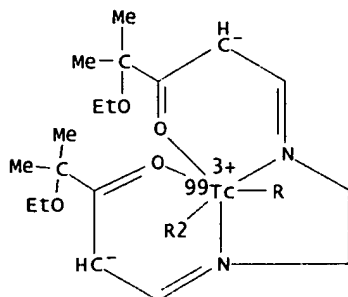


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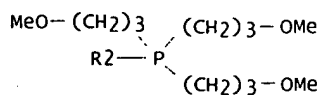


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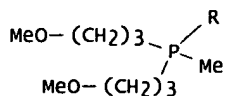
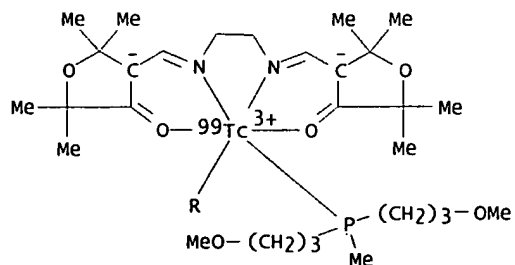
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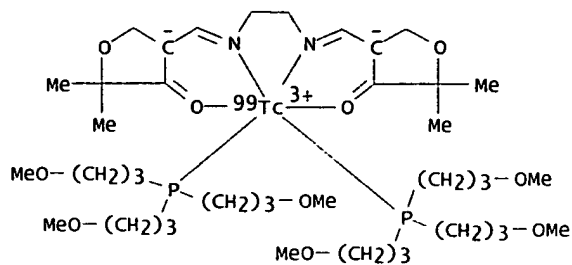
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 CN Technetium(1+)-99Tc, bis[bis(3-methoxypropyl)methylphosphine-.kappa.P][[4,4'-[1,2-ethanediylbis[(nitrido-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]-, (OC-6-13)- (9CI) (CA INDEX NAME)



RN 203566-07-8 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrido-.kappa.N)methylidyne]]bis[dihydro-2,2-dimethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)-

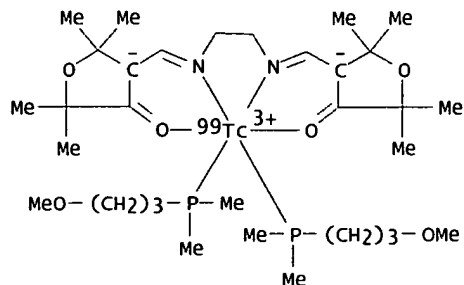
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(9CI) (CA INDEX NAME)



RN 203566-08-9 HCAPLUS

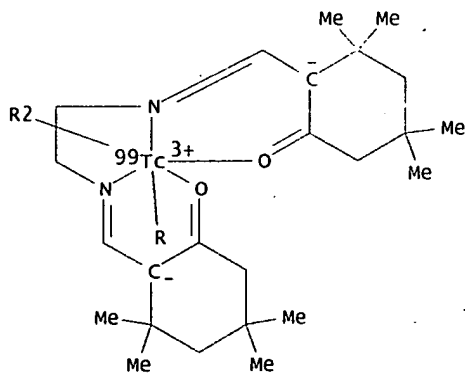
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediyl]bis[(nitrido-  
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 .kappa.O3]](2-)]bis[(3-methoxypropyl)dimethylphosphine-.kappa.P]-,  
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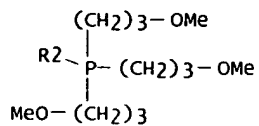
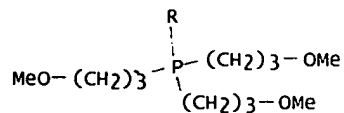
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 INDEX NAME)

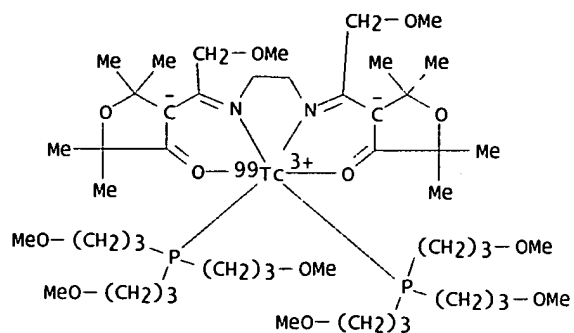
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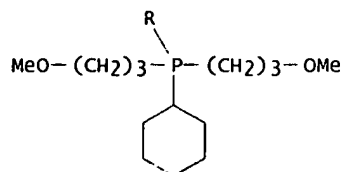
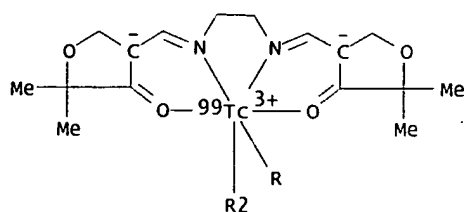


RN 203566-10-3 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)(2-methoxyethylidyne)]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)-(9CI) (CA INDEX NAME)

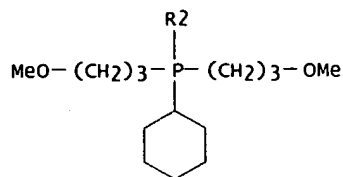


RN 203566-11-4 HCAPLUS  
 CN Technetium(1+)-99Tc, bis[cyclohexylbis(3-methoxypropyl)phosphine-.kappa.P][[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2-dimethyl-3(2H)-furanonato-.kappa.O3]](2-)]-, (OC-6-13)-(9CI) (CA INDEX NAME)

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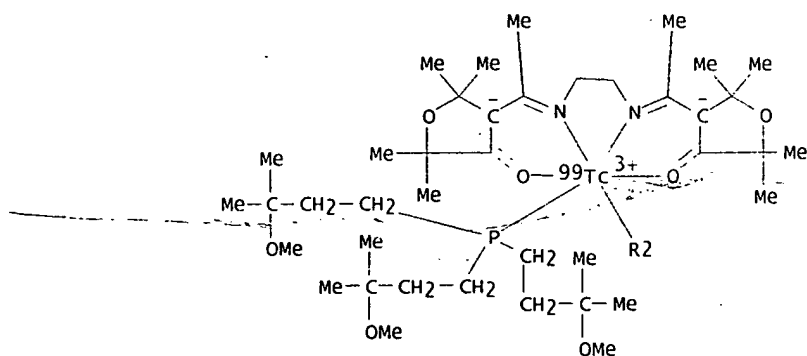


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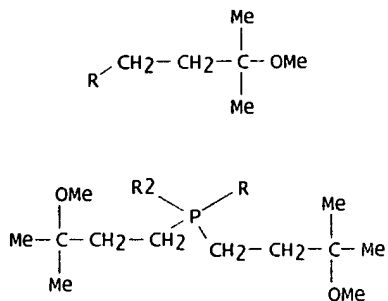


RN 203566-12-5 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-  
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 (OC-6-13)- (9CI) (CA INDEX NAME)

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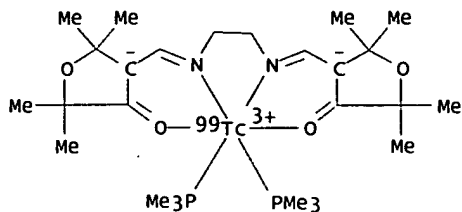


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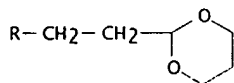
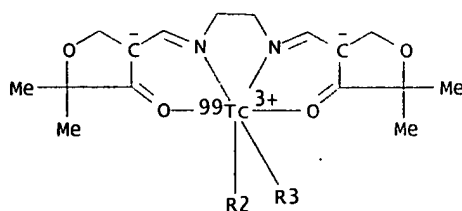
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 CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-  
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 .kappa.O3]](2-)]bis(trimethylphosphine)-, (OC-6-13)- (9CI) (CA INDEX  
 NAME)



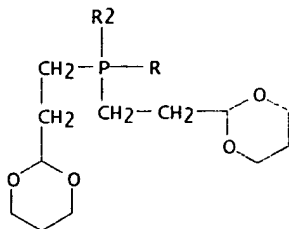


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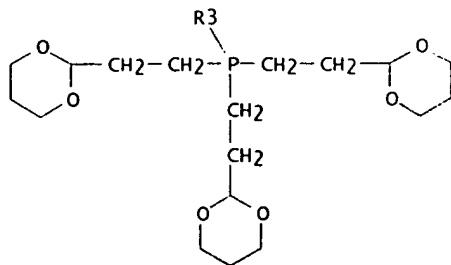
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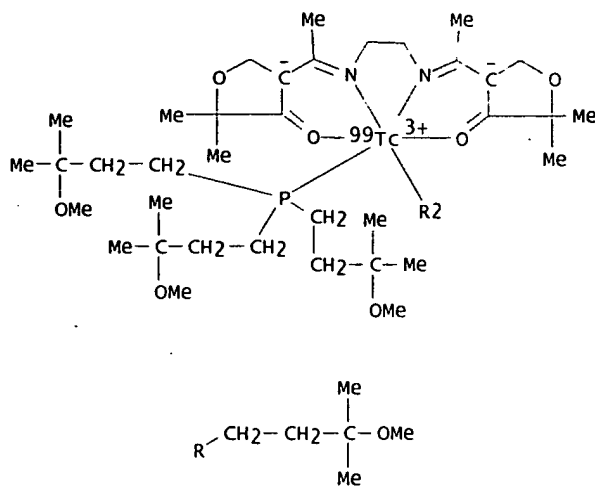


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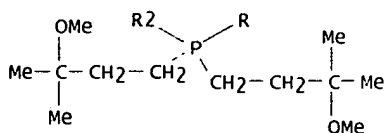
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.kappa.O3]](2-)]bis[tris(3-methoxy-3-methylbutyl)phosphine-.kappa.P]-,  
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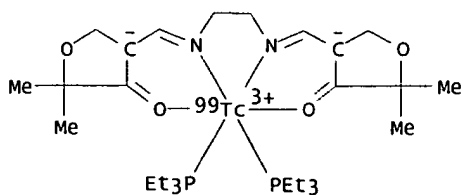
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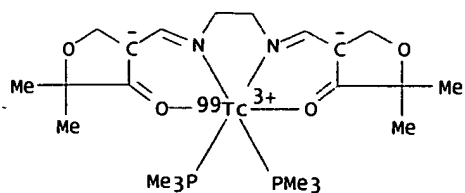
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RN 203566-16-9 HCAPLUS  
CN Technetium(1+)-99Tc, bis(triethylphosphine)[[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2-dimethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis(triethylphosphine)-, (OC-6-13)- (9CI)  
(CA INDEX NAME)

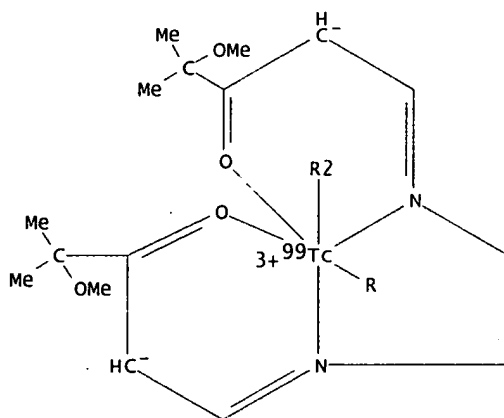


RN 203566-17-0 HCAPLUS  
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2-dimethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis(trimethylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)

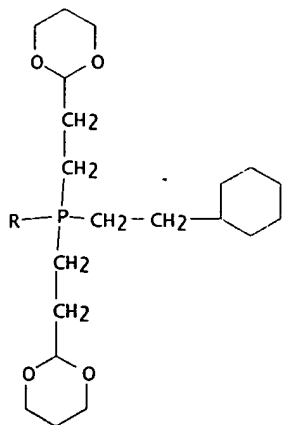


RN 203566-18-1 HCAPLUS  
 CN Technetium(1+)-99Tc, [(2-cyclohexylethyl)bis[2-(1,3-dioxan-2-yl)ethyl]phosphine-.kappa.P][3,3,14,14-tetramethyl-2,15-dioxo-7,10-diazahexadeca-6,10-diene-4,13-dionato(2-)-.kappa.N7,.kappa.N10,.kappa.O4,.kappa.O13][tris[2-(1,3-dioxan-2-yl)ethyl]phosphine-.kappa.P]-, (OC-6-13)-(9CI) (CA INDEX NAME)

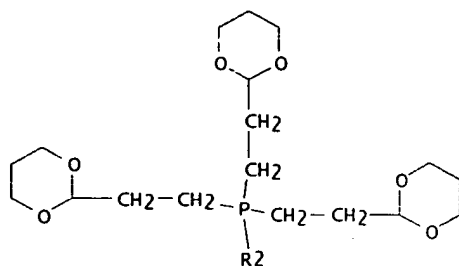
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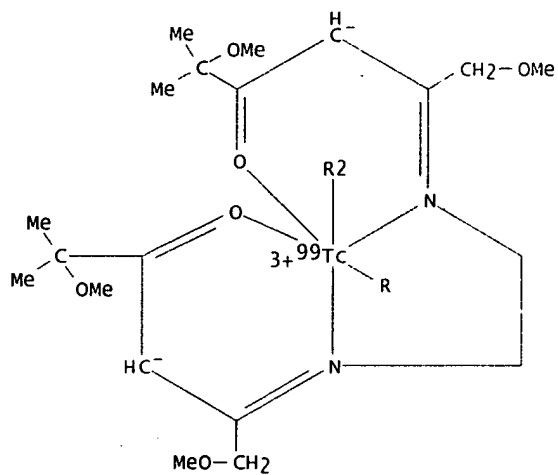


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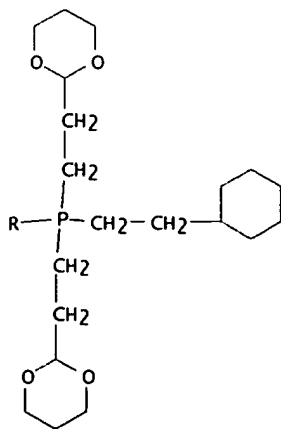


RN 203566-19-2 HCAPLUS  
 CN Technetium(1+)-99Tc, [6,11-bis(methoxymethyl)-3,3,14,14-tetramethyl-2,15-dioxo-7,10-diazahexadeca-6,10-diene-4,13-dionato(2-)-.kappa.N7,.kappa.N10,.kappa.O4,.kappa.O13][(2-cyclohexylethyl)bis[2-(1,3-dioxan-2-yl)ethyl]phosphine-.kappa.P][tris[2-(1,3-dioxan-2-yl)ethyl]phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

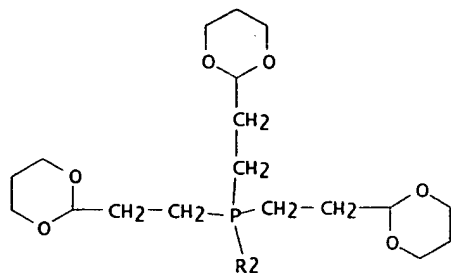
PAGE 1-A



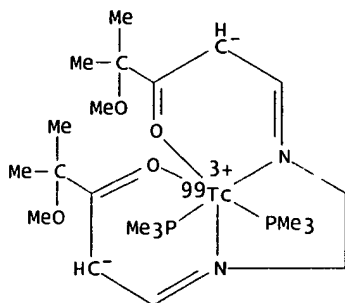
PAGE 2-A



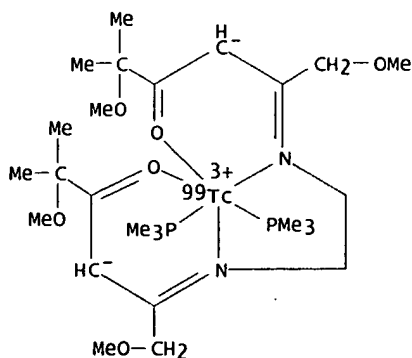
PAGE 3-A



RN 203566-20-5 HCAPLUS  
 CN Technetium(1+)-99Tc, [3,3,14,14-tetramethyl-2,15-dioxa-7,10-diazahexadeca-6,10-diene-4,13-dionato(2-)-.kappa.N7,.kappa.N10,.kappa.O4,.kappa.O13]bis(trimethylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)

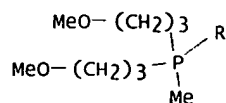
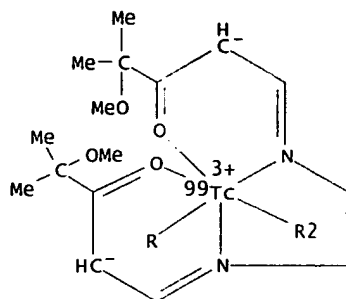


RN 203566-21-6 HCAPLUS  
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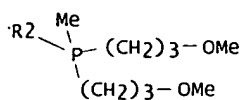


RN 203566-22-7 HCAPLUS  
 CN Technetium(1+)-99Tc, bis[bis(3-methoxypropyl)methylphosphine-.kappa.P][3,3,14,14-tetramethyl-2,15-dioxa-7,10-diazahexadeca-6,10-diene-4,13-dionato(2-)-.kappa.N7,.kappa.N10,.kappa.O4,.kappa.O13]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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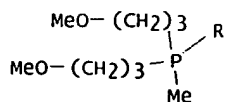
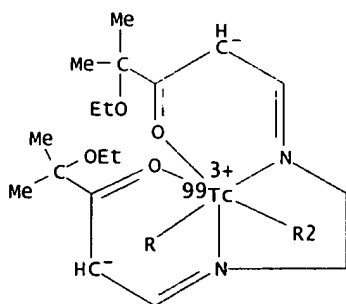


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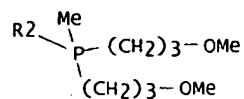


RN 203566-23-8 HCAPLUS  
 CN Technetium(1+)-99Tc, bis[bis(3-methoxypropyl)methylphosphine-  
 .kappa.P][4,4,15,15-tetramethyl-3,16-dioxa-8,11-diazaoctadeca-7,11-diene-  
 5,14-dionato(2-)-.kappa.N8,.kappa.N11,.kappa.O5,.kappa.O14]-, (OC-6-13)-  
 (9CI) (CA INDEX NAME)

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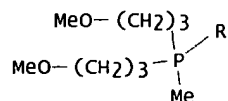
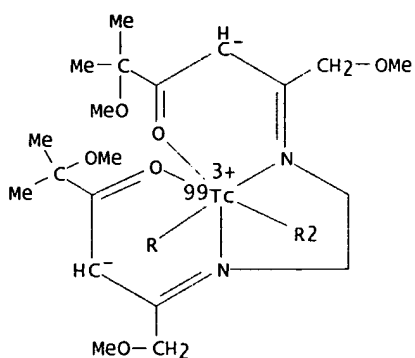


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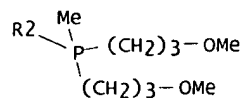


RN 203566-24-9 HCAPLUS  
 CN Technetium(1+)-99Tc, bis[bis(3-methoxypropyl)methylphosphine-  
 .kappa.P][[5,5'-[1,2-ethanediyl]di(nitrilo-.kappa.N)]bis[2,6-dimethoxy-2-  
 methyl-3-hexanonato-.kappa.O]](2-)-, (OC-6-13)- (9CI) (CA INDEX NAME)

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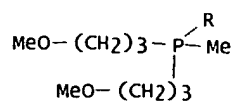
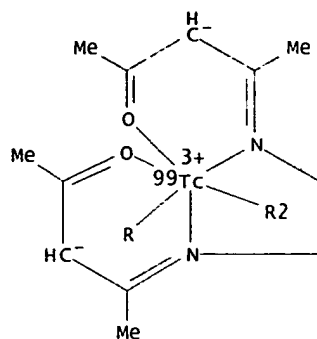


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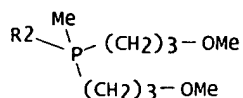


RN 203566-25-0 HCAPLUS  
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 .kappa.P][[3,3'-[1,2-ethanediyl]di(nitrilo-.kappa.N)]bis[2-pentanonato-  
 .kappa.O]](2-)-, (OC-6-13)- (9CI) (CA INDEX NAME)

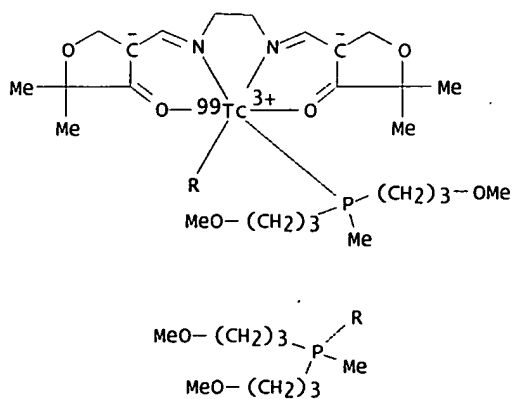
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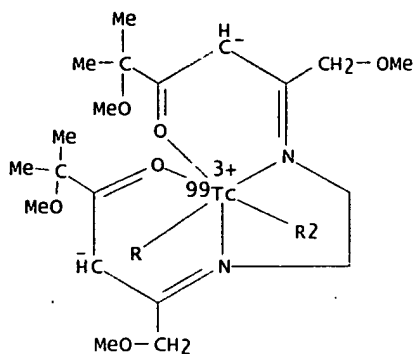
RN 203566-26-1 HCAPLUS  
 CN Technetium(1+)-99Tc, bis[bis(3-methoxypropyl)methylphosphine-  
 .kappa.P][[4,4'-(1,2-ethanediyl)bis[(nitrilo-.kappa.N)methylidyne]]bis[dihy-  
 dro-2,2-dimethyl-3(2H)-furanonato-.kappa.O3]](2-)]-, (OC-6-13)- (9CI) (CA  
 INDEX NAME)



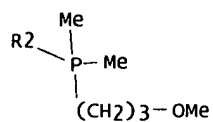
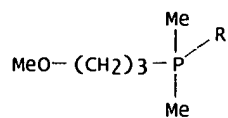
RN 203566-27-2 HCAPLUS  
 CN Technetium(1+)-99Tc, [6,11-bis(methoxymethyl)-3,3,14,14-tetramethyl-2,15-  
 dioxo-7,10-diazahexadeca-6,10-diene-4,13-dionato(2-)-  
 .kappa.N7,.kappa.N10,.kappa.O4,.kappa.O13]bis[(3-  
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 NAME)



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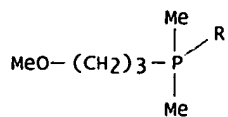
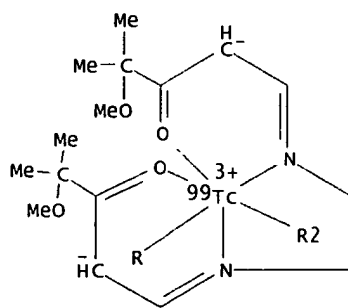


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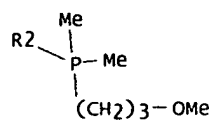


RN 203566-28-3 HCAPLUS  
 CN Technetium(1+)-99Tc, bis[(3-methoxypropyl)dimethylphosphine-  
 .kappa.P][3,3,14,14-tetramethyl-2,15-dioxa-7,10-diazahexadeca-6,10-diene-  
 4,13-dionato(2-)-.kappa.N7,.kappa.N10,.kappa.O4,.kappa.O13]-, (OC-6-13)-  
 (9CI) (CA INDEX NAME)

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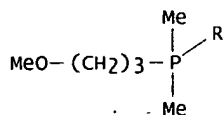
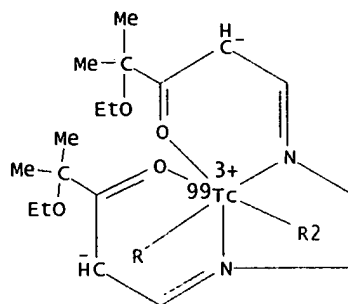


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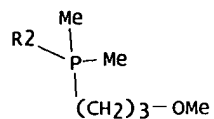


RN 203566-29-4 HCAPLUS  
 CN Technetium(1+)-99Tc, bis[(3-methoxypropyl)dimethylphosphine-  
 .kappa.P][4,4,15,15-tetramethyl-3,16-dioxo-8,11-diazaoctadeca-7,11-diene-  
 5,14-dionato(2-)-.kappa.N8,.kappa.N11,.kappa.O5,.kappa.O14]-, (OC-6-13)-  
 (9CI) (CA INDEX NAME)

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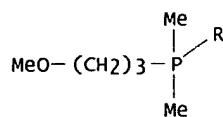
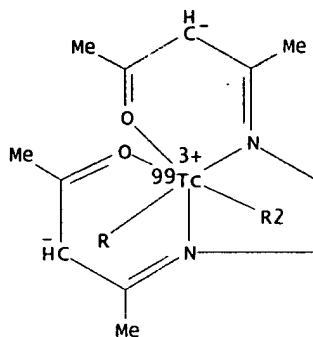


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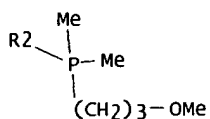


RN 203566-30-7 HCAPLUS  
 CN Technetium(1+)-99Tc, [[3,3'-[1,2-ethanediyl]di(nitrilo-.kappa.N)]bis[2-  
 pentanonato-.kappa.O]](2-)]bis[(3-methoxypropyl)dimethylphosphine-  
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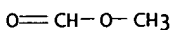
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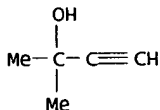
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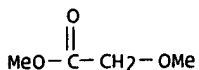
IT 107-31-3 115-19-5 6290-49-9 7719-12-2  
 , Phosphorous trichloride 23288-61-1, Pertechnetate-99Tc  
 36865-41-5  
 RL: RCT (Reactant)  
 (technetium 99m complexes for functional imaging of  
 multidrug resistance P-glycoprotein)  
 RN 107-31-3 HCAPLUS  
 CN Formic acid, methyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



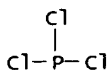
RN 115-19-5 HCAPLUS  
 CN 3-Butyn-2-ol, 2-methyl- (8CI, 9CI) (CA INDEX NAME)



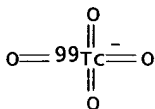
RN 6290-49-9 HCAPLUS  
 CN Acetic acid, methoxy-, methyl ester (7CI, 8CI, 9CI) (CA INDEX NAME)



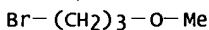
RN 7719-12-2 HCAPLUS  
 CN Phosphorous trichloride (9CI) (CA INDEX NAME)



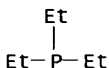
RN 23288-61-1 HCAPLUS  
CN Technetate (99TcO41-), (T-4)- (9CI) (CA INDEX NAME)



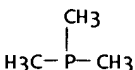
RN 36865-41-5 HCAPLUS  
CN Propane, 1-bromo-3-methoxy- (9CI) (CA INDEX NAME)



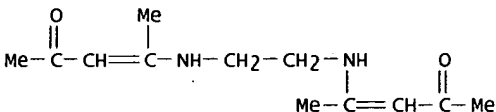
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7740-69-4P 13994-57-5P 36687-98-6P  
36687-99-7P 83622-85-9P 142996-66-5P  
142996-73-4P 142996-76-7P 142996-85-8P  
142996-90-5P 142996-92-7P 142996-93-8P  
143785-24-4P 169250-16-2P 203565-94-0P  
203565-95-1P 203565-96-2P 203565-97-3P  
203565-98-4P 203565-99-5P 203566-31-8P  
203566-32-9P 203566-33-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(technetium 99m complexes for functional imaging of  
multidrug resistance P-glycoprotein)  
RN 554-70-1 HCAPLUS  
CN Phosphine, triethyl- (6CI, 8CI, 9CI) (CA INDEX NAME)



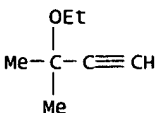
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CN Phosphine, trimethyl- (6CI, 8CI, 9CI) (CA INDEX NAME)



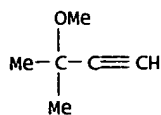
RN 7275-44-7 HCAPLUS  
CN 3-Penten-2-one, 4,4'-(1,2-ethanediylidimino)bis- (9CI) (CA INDEX NAME)



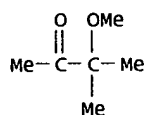
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CN 1-Butyne, 3-ethoxy-3-methyl- (9CI) (CA INDEX NAME)



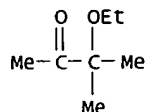
RN 13994-57-5 HCAPLUS  
CN 1-Butyne, 3-methoxy-3-methyl- (9CI) (CA INDEX NAME)



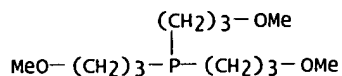
RN 36687-98-6 HCAPLUS  
CN 2-Butanone, 3-methoxy-3-methyl- (6CI, 7CI, 9CI) (CA INDEX NAME)



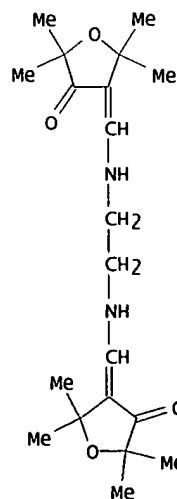
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CN 2-Butanone, 3-ethoxy-3-methyl- (6CI, 7CI, 9CI) (CA INDEX NAME)



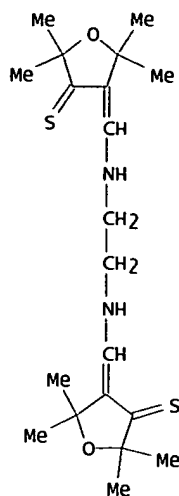
RN 83622-85-9 HCAPLUS  
CN Phosphine, tris(3-methoxypropyl)- (9CI) (CA INDEX NAME)



RN 142996-66-5 HCAPLUS  
CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)

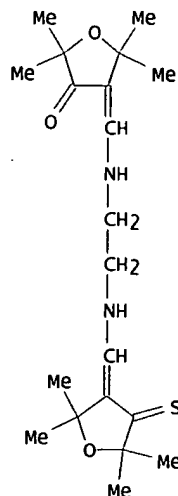


RN 142996-73-4 HCAPLUS  
CN 3(2H)-Furanthione, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



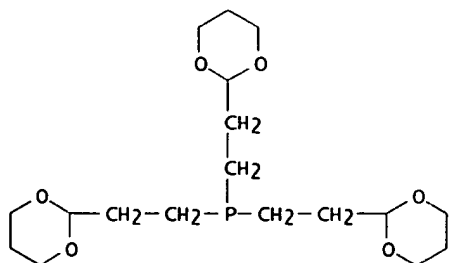
RN 142996-76-7 HCAPLUS

3(2H)-Furanone, 4-[[[2-[[[(dihydro-2,2,5,5-tetramethyl-4-thioxo-3(2H)-furylidene)methyl]amino]ethyl]amino]methylene]dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



RN 142996-85-8 HCAPLUS

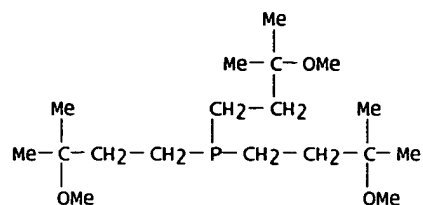
RN	142990-09-0	HCAPL03
CN	Phosphine, tris[2-(1,3-dioxan-2-yl)ethyl]- (9CI)	(CA INDEX NAME)



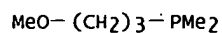
RN 142996-90-5 HCAPLUS

CN	Phosphine, tris(3-methoxy-3-methylbutyl)- (9CI) (CA INDEX NAME)
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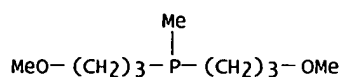
SEARCHED BY SUSAN HANLEY 305-4053



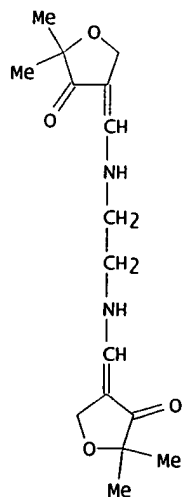
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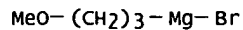
RN 142996-93-8 HCAPLUS  
CN Phosphine, bis(3-methoxypropyl)methyl- (9CI) (CA INDEX NAME)



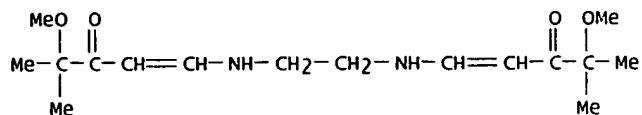
RN 143785-24-4 HCAPLUS  
CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2-dimethyl- (9CI) (CA INDEX NAME)



RN 169250-16-2 HCAPLUS  
CN Magnesium, bromo(3-methoxypropyl)- (9CI) (CA INDEX NAME)

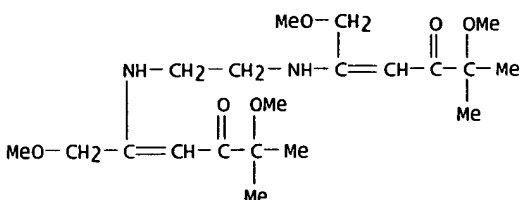


RN 203565-94-0 HCAPLUS  
CN 2,15-Dioxa-7,10-diazahexadeca-5,11-diene-4,13-dione, 3,3,14,14-tetramethyl- (9CI) (CA INDEX NAME)



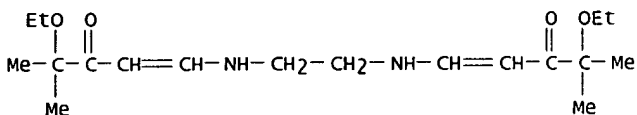
RN 203565-95-1 HCAPLUS

CN 2,15-Dioxa-7,10-diazahexadeca-5,11-diene-4,13-dione, 6,11-bis(methoxymethyl)-3,3,14,14-tetramethyl- (9CI) (CA INDEX NAME)



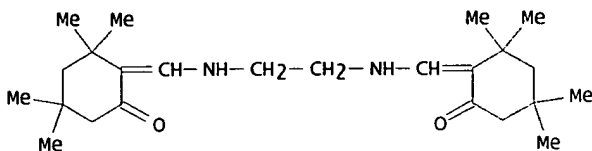
RN 203565-96-2 HCAPLUS

CN 3,16-Dioxa-8,11-diazaoctadeca-6,12-diene-5,14-dione, 4,4,15,15-tetramethyl- (9CI) (CA INDEX NAME)



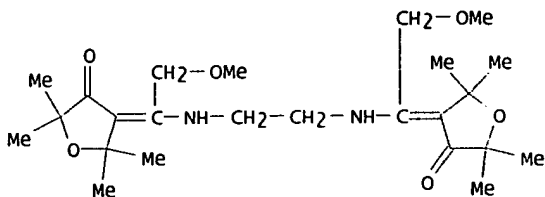
RN 203565-97-3 HCAPLUS

CN Cyclohexanone, 2,2'-[1,2-ethanediylbis(iminomethylidyne)]bis[3,3,5,5-tetramethyl- (9CI) (CA INDEX NAME)



RN 203565-98-4 HCAPLUS

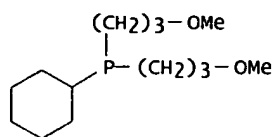
CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis(imino(2-methoxyethylidyne))]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



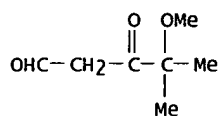
RN 203565-99-5 HCAPLUS

CN Phosphine, cyclohexylbis(3-methoxypropyl)- (9CI) (CA INDEX NAME)

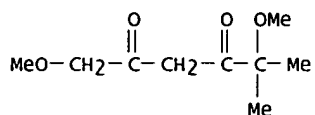




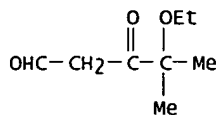
RN 203566-31-8 HCAPLUS  
 CN Pentanal, 4-methoxy-4-methyl-3-oxo- (9CI) (CA INDEX NAME)



RN 203566-32-9 HCAPLUS  
 CN 2,4-Hexanedione, 1,5-dimethoxy-5-methyl- (9CI) (CA INDEX NAME)

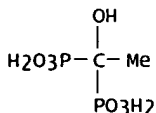


RN 203566-33-0 HCAPLUS  
 CN Pentanal, 4-ethoxy-4-methyl-3-oxo- (9CI) (CA INDEX NAME)



=&gt; d bib abs'hitstr 126 3

L26 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1997:377784 HCAPLUS  
 DN 127:43913  
 TI Studies of the Structure and Composition of Rhenium  
 -1,1-Hydroxyethylidenediphosphonate (HEDP)  
 AU Elder, R. C.; Yuan, Jie; Helmer, Bella; Pipes, David; Deutsch,  
 Karen; Deutsch, Edward  
 CS Biomedical Chemistry Research Center Department of Chemistry, University  
 of Cincinnati, Cincinnati, OH, 45221-0172, USA  
 SO Inorg. Chem. (1997), 36(14), 3055-3063  
 CODEN: INOCAJ; ISSN: 0020-1669  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB Several of analogs of 186Re 1,1-hydroxyethylidenediphosphonic acid  
 (H4HEDP) using nonradioactive Re were prep'd. and structurally  
 characterized using EXAFS (extended x-ray absorption fine structure)  
 spectroscopy. One complex synthesized via the substitution  
 reaction of HEDP with trans-[(py)4(O)2Re]Cl in abs. EtOH appears to be the  
 1:1 salt of the tris-HEDP complex anion with the starting  
 Re cation, [(py)4(O)2Re][Re(H2HEDP)3]. Three other  
 materials, all synthesized via redn. of perrhenate by SnCl2 in the  
 presence of excess H4HEDP ligand, are quite different in structure from  
 the material formed by substitution. The principal difference is that  
 each of these contains Re-Re bonds and is formulated  
 as oligomers. The material with a large excess of reductant has  
 Re-Re bonds of .apprx.2.4 .ANG. and is best modeled as a  
 linear tetramer of Re atoms bridged by HEDP ligands which also  
 bind an equiv. no. of Sn atoms with addnl. HEDP ligands. It is  
 Lix[Re4(OH)2Sn4(HEDP)12]. The material formed with the least amt. of  
 reducing agent is best modeled as a triangular cluster of Re  
 atoms bridged by two HEDP ligands and bridged to three Sn atoms by HEDP  
 to form a complex Lix[Re3Sn3(HEDP)8]. It also has Re-  
 Re bonds but of a significantly longer distance, .apprx.2.8 .ANG..  
 A material with an intermediate amt. of reducing agent, prep'd. in a manner  
 most closely resembling the medically effective palliative agent, appears  
 to contain a mixt. of these, and perhaps other, oligomers.  
 IT 2809-21-4DP, rhenium tin polynuclear complexes  
 7440-15-5DP, Rhenium, tin hydroxyethylidenediphosphonic  
 acid polynuclear complexes 7440-31-5DP, Tin,  
 rhenium hydroxyethylidenediphosphonic acid polynuclear  
 complexes 190247-60-OP  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and mol. structure and EXAFS)  
 RN 2809-21-4 HCAPLUS  
 CN Phosphonic acid, (1-hydroxyethylidene)bis- (9CI) (CA INDEX NAME)



RN 7440-15-5 HCAPLUS  
 CN Rhenium (8CI, 9CI) (CA INDEX NAME)

Re

RN 7440-31-5 HCAPLUS  
 CN Tin (8CI, 9CI) (CA INDEX NAME)

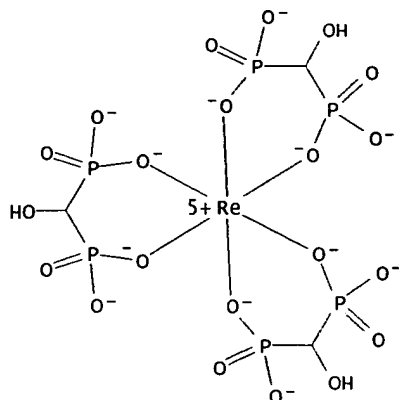
Sn

RN 190247-60-0 HCAPLUS  
 CN Rhenium(1+), dioxotetrakis(pyridine)-, (OC-6-12)-, hydrogen  
 (OC-6-11)-tris[[ (hydroxymethylene)bis[phosphonato-.kappa.O]](4-)]rhenate(7-

) (1:6:1) (9CI) (CA INDEX NAME)

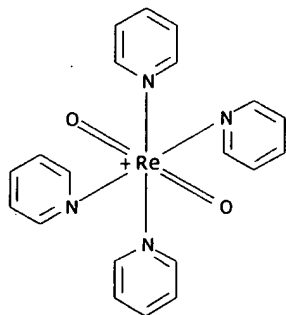
CM 1

CRN 190247-59-7  
 CMF C3 H6 O21 P6 Re  
 CCI CCS  
 CDES 7:OC-6-11

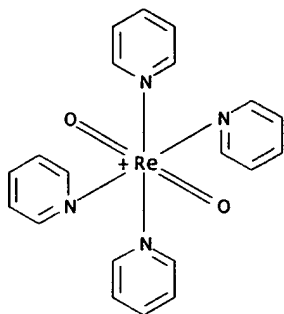


CM 2

CRN 21710-28-1  
 CMF C20 H20 N4 O2 Re  
 CCI CCS  
 CDES 7:OC-6-12

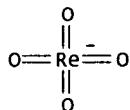


IT 31429-86-4, trans-Dioxotetrakis(pyridine)rhenium(1+)  
 chloride  
 RL: RCT (Reactant)  
 (reaction with hydroxyethylidenediphosphonic acid)  
 RN 31429-86-4 HCAPLUS  
 CN Rhenium(1+), dioxotetrakis(pyridine)-, chloride, (OC-6-12)- (9CI) (CA  
 INDEX NAME)



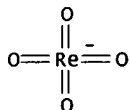
● Cl<sup>-</sup>

IT 10466-65-6, Potassium perrhenate 13472-33-8, Sodium perrhenate  
 RL: RCT (Reactant)  
 (reaction with hydroxyethylidenediphosphonic acid and stannous chloride)  
 RN 10466-65-6 HCAPLUS  
 CN Rhenate (ReO41-), potassium, (T-4)- (9CI) (CA INDEX NAME)



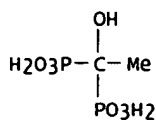
● K<sup>+</sup>

RN 13472-33-8 HCAPLUS  
 CN Rhenate (ReO41-), sodium, (T-4)- (9CI) (CA INDEX NAME)



● Na<sup>+</sup>

IT 2809-21-4  
 RL: RCT (Reactant)  
 (reaction with perrhenate and stannous chloride or with dioxotetrakis(pyridine)rhenium(1+))  
 RN 2809-21-4 HCAPLUS  
 CN Phosphonic acid, (1-hydroxyethylidene)bis- (9CI) (CA INDEX NAME)



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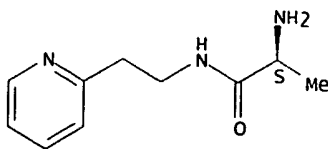
=&gt; d bib abs hitstr 126 4

L26 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1997:299439 HCAPLUS  
 DN 127:2556  
 TI Preparation, Characterization, and Biological Evaluation of Technetium(V) and Rhenium(V) Complexes of Novel Heterocyclic Tetradentate N3S Ligands  
 AU Rajagopalan, Raghavan; Grummon, Glenn D.; Bugaj, Joseph; Hallemann, Lynn S.; Webb, Elizabeth G.; Marmion, Mary E.; Vanderheyden, Jean-Luc; Srinivasan, Ananthachari  
 CS Mallinckrodt Medical Inc., St. Louis, MO, 63134, USA  
 SO Bioconjugate Chem. (1997), 8(3), 407-415  
 CODEN: BCCHES; ISSN: 1043-1802  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB Various tetradentate N3S ligands which contain pyridyl, morpholino, or imidazolyl moieties were prepd. and labeled with technetium and rhenium. Metal complexation of the ligands occurred efficiently over the pH range from 2 to 11. Ligands possessing the S-THP (tetrahydropyranyl)-protected mercapto group labeled efficiently even under alk. conditions, and among the three types of heterocyclic metal complexes, a marked difference in stability was obsd.; rhenium complexes decompd. to ReO4- whereas technetium complexes decompd. to TcO2/TcO4-. In general, imidazolyl complexes of both technetium and rhenium were very stable in saline; less than 10% decompn. after 24 h. The technetium histidyl complex and technetium pyridyl complex were quite stable even under cysteine challenge; less than 10% decompn. after 24 h. The rhenium and technetium morpholino complexes were very unstable; greater than 10% decompn. after only 1 h in saline and greater than 25% decompn. in 1 h under cysteine challenge. Profound pharmacokinetic differences among these metal complexes were also obsd. in rat biodistribution studies. The neutral pyridyl complexes exhibited high blood and liver uptake and slow clearance from these tissues. The replacement of a hydroxyl group by a carboxyl group, which resulted in an anionic complex at physiolo. pH, resulted in a dramatic decrease in blood and liver uptake. The neutral imidazolyl complex exhibited marked redn. in blood uptake and much faster clearance from blood and liver compared to the neutral pyridyl complex. Finally, the anionic histidyl complex, which contains both the imidazolyl and carboxyl groups, had the most favorable pharmacokinetic properties in that it exhibited very low blood, liver, and kidney uptakes and a rapid clearance from the body via the renal system. The combination of the high stability and favorable pharmacokinetic properties of the imidazolyl complexes should render them useful for targeted delivery of the medically important isotopes.

IT 102523-03-5P 121557-45-7P 190122-99-7P  
 190123-09-2P 190123-20-7P 190123-27-4P  
 190123-31-0P 190123-37-6P 190123-39-8P  
 190123-41-2P 190123-44-5P 190123-45-6P  
 190123-47-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation) (intermediate; prepn., characterization, and biol. evaluation of Tc(V) and Re(V) complexes of heterocyclic tetradentate N3S ligands for tissue targeting)

RN 102523-03-5 HCAPLUS  
 CN Propanamide, 2-amino-N-[2-(2-pyridinyl)ethyl]-, (S)- (9CI) (CA INDEX NAME)

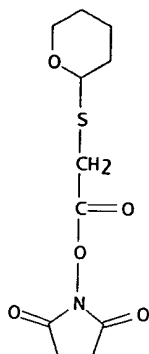
Absolute stereochemistry.



RN 121557-45-7 HCAPLUS  
 CN 2,5-Pyrrolidinedione, 1-[[[(tetrahydro-2H-pyran

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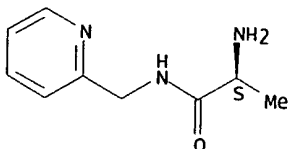
(9CI) (CA INDEX NAME)



RN 190122-99-7 HCAPLUS

Propanamide, 2-amino-N-(2-pyridinylmethyl)-, (S)- (9CI) (CA INDEX NAME)

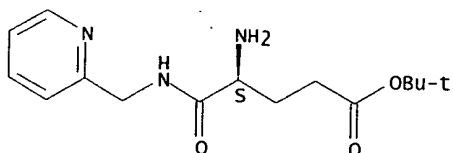
Absolute stereochemistry.



RN 190123-09-2 HCAPLUS

CN Pentanoic acid, 4-amino-5-oxo-5-[(2-pyridinylmethyl)amino]-,  
 1,1-dimethylethyl ester, (S)- (9CI) (CA INDEX NAME)

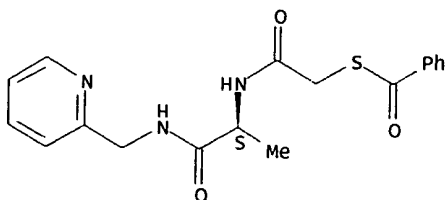
Absolute stereochemistry.



RN 190123-20-7 HCAPLUS

190125-20-7 HCAPLUS  
CN Benzenecarbothioic acid, S-[2-[[1-methyl-2-oxo-2-[(2-pyridinylmethyl)amino]ethyl]amino]-2-oxoethyl] ester, (S)- (9CI) (CA  
INDEX NAME)

Absolute stereochemistry.

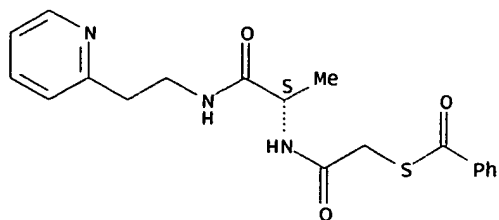


RN 190123-27-4 HCAPLUS

190125-27-4 HCAPLUS  
CN Benzenecarbothioic acid, S-[2-[[1-methyl-2-oxo-2-[[2-(  
pyridinyl)ethyl]amino]ethyl]amino]-2-oxoethyl] ester  
INDEX NAME)

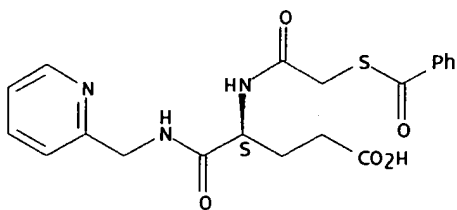
**Absolute stereochemistry.**

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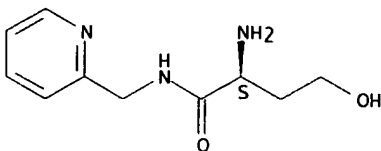
RN 190123-31-0 HCAPLUS  
CN Pentanoic acid, 4-[[[(benzoylthio)acetyl]amino]-5-oxo-5-[(2-pyridinylmethyl)amino]-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



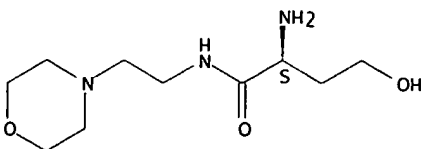
RN 190123-37-6 HCAPLUS  
CN Butanamide, 2-amino-4-hydroxy-N-(2-pyridinylmethyl)-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



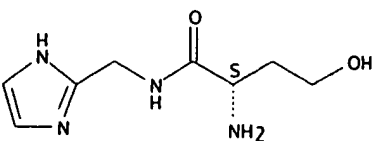
RN 190123-39-8 HCAPLUS  
CN Butanamide, 2-amino-4-hydroxy-N-[2-(4-morpholinyl)ethyl]-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 190123-41-2 HCAPLUS  
CN Butanamide, 2-amino-4-hydroxy-N-(1H-imidazol-2-ylmethyl)-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

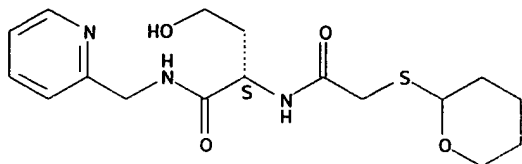


RN 190123-44-5 HCAPLUS  
CN Butanamide, 4-hydroxy-N-(2-pyridinylmethyl)-2-[[[(tetrahydro-2H-pyran-2-



yl)thio]acetyl]amino]-, [2(S)]-[partial]- (9CI) (CA INDEX NAME)

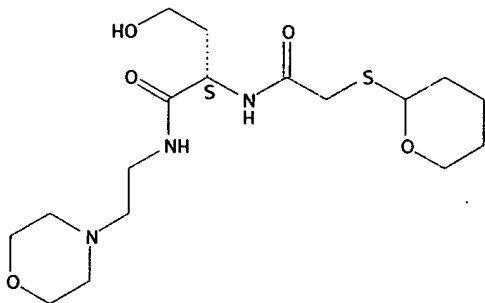
Absolute stereochemistry.



RN 190123-45-6 HCAPLUS

CN Butanamide, 4-hydroxy-N-[2-(4-morpholinyl)ethyl]-2-[[[(tetrahydro-2H-pyran-2-yl)thio]acetyl]amino]-, [2(S)]-[partial]- (9CI) (CA INDEX NAME)

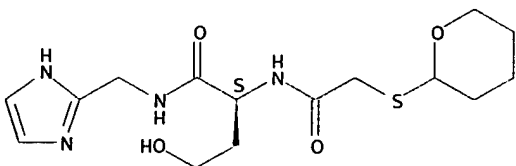
Absolute stereochemistry.



RN 190123-47-8 HCAPLUS

CN Butanamide, 4-hydroxy-N-(1H-imidazol-2-ylmethyl)-2-[[[(tetrahydro-2H-pyran-2-yl)thio]acetyl]amino]-, [2(S)]-[partial]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

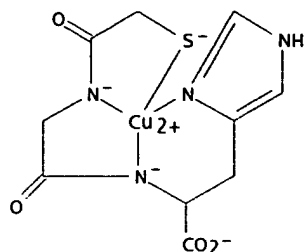


IT 70896-70-7P 128548-76-5P 159737-46-9P  
190123-49-0P 190123-52-5P 190123-55-8P  
190123-56-9P 190123-58-1P 190123-60-5P  
190123-61-6P 190123-62-7P 190123-64-9P

RL: BPR (Biological process); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)  
(prepn., characterization, and biol. evaluation of Tc(V) and Re(V) complexes of heterocyclic tetradentate N3S ligands for tissue targeting)

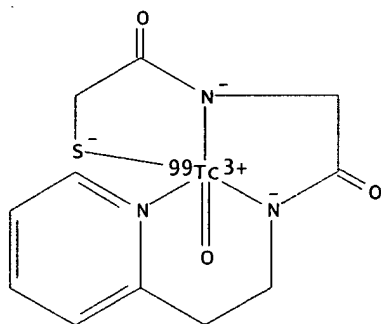
RN 70896-70-7 HCAPLUS

CN Cuprate(2-), [(mercapto-.kappa.S)acetyl]glycyl-.kappa.N-L-histidinato(4-)-.kappa.N,.kappa.N3]-, dihydrogen, (SP-4-3)- (9CI) (CA INDEX NAME)

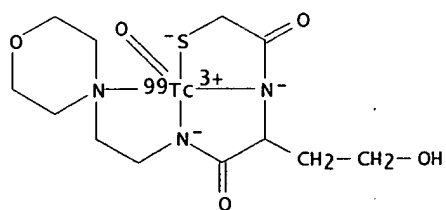


● 2 H<sup>+</sup>

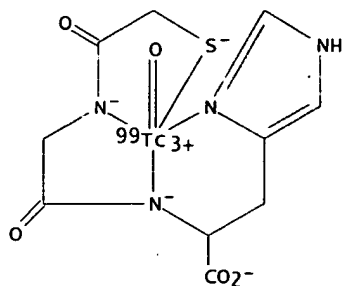
RN 128548-76-5 HCAPLUS  
CN Technetium-99Tc, [2-[[[(mercapto-.kappa.S)acetyl]amino-.kappa.N]-N-[2-(2-pyridinyl-.kappa.N)ethyl]acetamidato(3-)-.kappa.N]oxo-, (SP-5-25)- (9CI) (CA INDEX NAME)



RN 159737-46-9 HCAPLUS  
CN Technetium-99Tc, [4-hydroxy-2-[[[(mercapto-.kappa.S)acetyl]amino-.kappa.N]-N-[2-(4-morpholinyl-.kappa.N4)ethyl]butanamidato(3-)-.kappa.N]oxo-, [SP-5-25-(S)]- (9CI) (CA INDEX NAME)

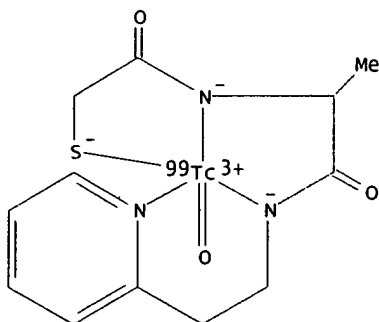


RN 190123-49-0 HCAPLUS  
CN Technetate(1-)-99Tc, [[(mercapto-.kappa.S)acetyl]glycyl-.kappa.N-L-histidinato(4-)-.kappa.N,.kappa.N3]oxo-, hydrogen, (SP-5-24)- (9CI) (CA INDEX NAME)

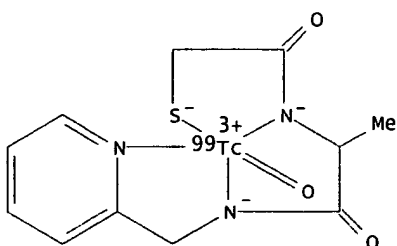


● H<sup>+</sup>

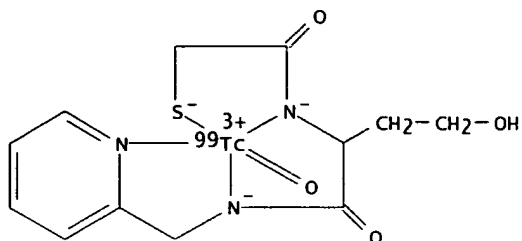
RN 190123-52-5 HCAPLUS  
CN Technetium-99Tc, [2-[[[mercapto-.kappa.S)acetyl]amino-.kappa.N]-N-[2-(2-pyridinyl-.kappa.N)ethyl]propanamidato(3-)-.kappa.N]oxo-, [SP-5-25-(S)]-(9CI) (CA INDEX NAME)



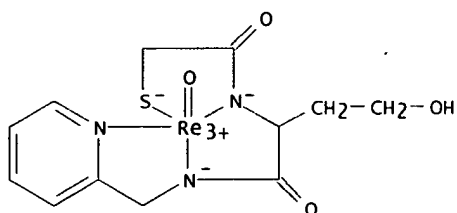
RN 190123-55-8 HCAPLUS  
CN Technetium-99Tc, [2-[[[mercapto-.kappa.S)acetyl]amino-.kappa.N]-N-[(2-pyridinyl-.kappa.N)methyl]propanamidato(3-)-.kappa.N]oxo-, [SP-5-25-(S)]-(9CI) (CA INDEX NAME)



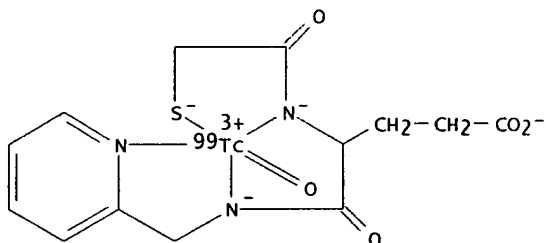
RN 190123-56-9 HCAPLUS  
CN Technetium-99Tc, [4-hydroxy-2-[[[mercapto-.kappa.S)acetyl]amino-.kappa.N]-N-[(2-pyridinyl-.kappa.N)methyl]butanamidato(3-)-.kappa.N]oxo-, [SP-5-25-(S)]-(9CI) (CA INDEX NAME)



RN 190123-58-1 HCAPLUS  
CN Rhenium, [4-hydroxy-2-[[[(mercapto-.kappa.S)acetyl]amino-.kappa.N]-N-[(2-pyridinyl-.kappa.N)methyl]butanamidato(3-)-.kappa.N]oxo-, [SP-5-25-(S)]-(9CI) (CA INDEX NAME)

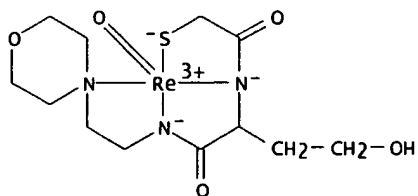


RN 190123-60-5 HCAPLUS  
CN Technetate(1-)-99Tc, [4-[[[(mercapto-.kappa.S)acetyl]amino-.kappa.N]-5-oxo-5-[[[(2-pyridinyl-.kappa.N)methyl]amino-.kappa.N]pentanoato(4-)]oxo-, hydrogen, [SP-5-25-(S)]-(9CI) (CA INDEX NAME)



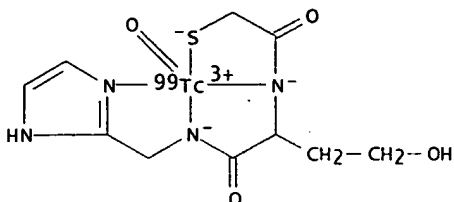
● H<sup>+</sup>

RN 190123-61-6 HCAPLUS  
CN Rhenium, [4-hydroxy-2-[[[(mercapto-.kappa.S)acetyl]amino-.kappa.N]-N-[2-(4-morpholinyl-.kappa.N4)ethyl]butanamidato(3-)-.kappa.N]oxo-, [SP-5-25-(S)]-(9CI) (CA INDEX NAME)

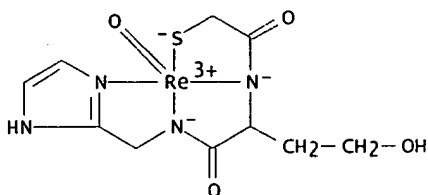


RN 190123-62-7 HCAPLUS  
CN Technetium-99Tc, [4-hydroxy-N-[(1H-imidazol-2-yl-.kappa.N3)methyl]-2-[[[(mercapto-.kappa.S)acetyl]amino-.kappa.N]butanamidato(3-)-.kappa.N]oxo-,

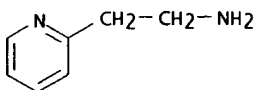
[SP-5-25-(S)]- (9CI) (CA INDEX NAME)



RN 190123-64-9 HCAPLUS  
 CN Rhenium, [4-hydroxy-N-[(1H-imidazol-2-yl-.kappa.N3)methyl]-2-[[ (mercapto-.kappa.S)acetyl]amino-.kappa.N]butanamidato(3-)-.kappa.N]oxo-,  
 [SP-5-25-(S)]- (9CI) (CA INDEX NAME)

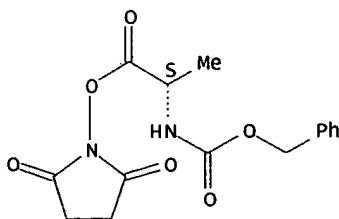


IT 2706-56-1, 2-Pyridineethanamine 3401-36-3  
 3731-51-9, 2-Pyridinemethanamine 4666-16-4  
 35677-89-5 90236-37-6  
 RL: RCT (Reactant)  
 (reactant; prepn., characterization, and biol. evaluation of Tc  
 (V) and Re(V) complexes of heterocyclic  
 tetradentate N3S ligands for tissue targeting)  
 RN 2706-56-1 HCAPLUS  
 CN 2-Pyridineethanamine (9CI) (CA INDEX NAME)

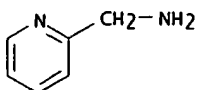


RN 3401-36-3 HCAPLUS  
 CN Carbamic acid, [(1S)-2-[(2,5-dioxo-1-pyrrolidinyl)oxy]-1-methyl-2-oxoethyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

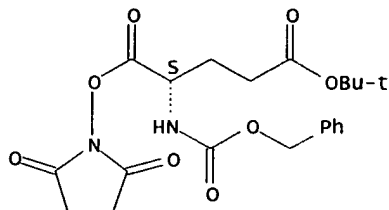


RN 3731-51-9 HCAPLUS  
 CN 2-Pyridinemethanamine (9CI) (CA INDEX NAME)



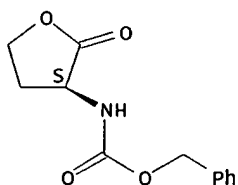
RN 4666-16-4 HCAPLUS  
 CN Pentanoic acid, 5-[(2,5-dioxo-1-pyrrolidinyloxy)-5-oxo-4-[[phenylmethoxy]carbonyl]amino]-, 1,1-dimethylethyl ester, (4S)- (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry.

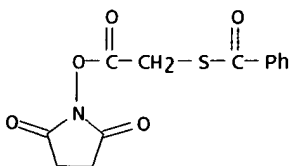


RN 35677-89-5 HCAPLUS  
 CN Carbamic acid, [(3S)-tetrahydro-2-oxo-3-furanyl]-, phenylmethyl ester  
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 90236-37-6 HCAPLUS  
 CN Benzenecarbothioic acid, S-[2-[(2,5-dioxo-1-pyrrolidinyloxy)-2-oxoethyl] ester (9CI) (CA INDEX NAME)



=&gt; d bib abs hitstr 126 5

L26 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2001 ACS

AN 1996:170827 HCAPLUS

DN 124:225267

TI Difference imaging method for the identification of multidrug-resistant tumor cells

IN Dyszlewski, Mary Marmion; Doedens, Bart J.; Burleigh, B. Daniel

PA Mallinckrodt Medical, Inc., USA

SO PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9600085	A1	19960104	WO 1995-US8089	19950627
	W: CA, CZ, FI, HU, JP, MX, NO, PL				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI	US 1994-267068		19940627		

AB A method is provided for identifying tumor cells exhibiting the multidrug-resistance (MDR) characteristic; the method uses a pair of radiolabeled compds. to form a difference image of the cells. One of the radiolabeled compds. is a substrate for P-glycoprotein and the other is not. The radiolabeled compds. may be labeled with the same or different radioisotope, and the compds. may be introduced or administered sequentially or simultaneously to obtain the difference image in one or two imaging sessions, resp. Prepn. of radiolabeled compds., e.g. <sup>99m</sup>Tc-Q45, is described. <sup>99m</sup>Tc-Q51 was prepd. by reacting <sup>99m</sup>TcO<sub>4</sub><sup>-</sup> with 5,5'-(1,2-ethanediyldiimino)bis(2-ethoxy-2-methyl-4-penten-3-one) and reacting the intermediate with PMe<sub>3</sub>-HCl. Compds. were tested using drug-sensitive and drug-resistant human renal carcinoma cell lines.

IT 15750-15-9, Indium-111, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(cationic compd. labeled with; difference imaging method for the identification of multidrug-resistant tumor cells)

RN 15750-15-9 HCAPLUS

CN Indium, isotope of mass 111 (8CI, 9CI) (CA INDEX NAME)

111In

IT 129134-13-0P 143049-63-2P 174529-19-2P

174529-20-5P

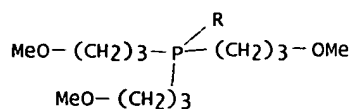
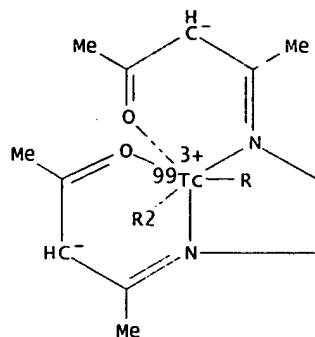
RL: BPR (Biological process); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC  
(Process); USES (Uses)

(difference imaging method for the identification of  
multidrug-resistant tumor cells)

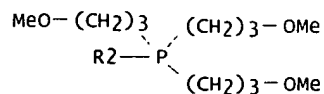
RN 129134-13-0 HCAPLUS

CN Technetium(1+)-<sup>99</sup>Tc, [[4,4'-(1,2-ethanediyldi(nitrilo-.kappa.N)]bis[2-pentanonato-.kappa.O]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

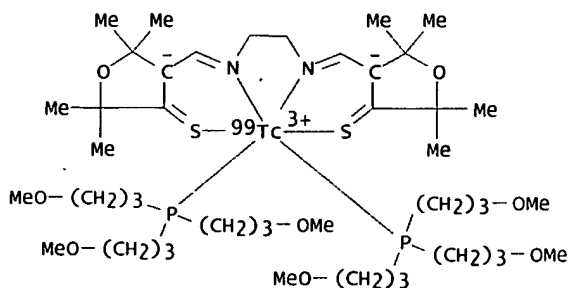
PAGE 1-A



PAGE 2-A

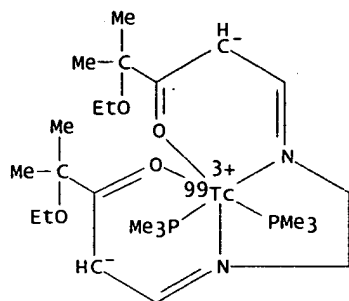


RN 143049-63-2 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-  
 .kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanthionato-  
 .kappa.S3]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-33)-  
 (9CI) (CA INDEX NAME)



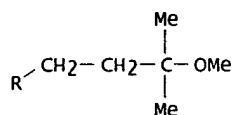
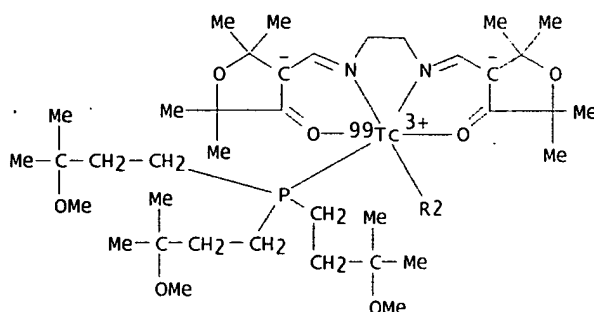
RN 174529-19-2 HCAPLUS  
 CN Technetium(1+)-99Tc, [4,4,15,15-tetramethyl-3,16-dioxa-8,11-diazaoctadeca-  
 7,11-diene-5,14-dionato(2-)-.kappa.N8,.kappa.N11,.kappa.O5,.kappa.O14]bis(  
 trimethylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)



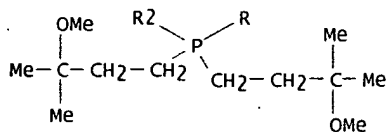


RN 174529-20-5 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediyl]bis(nitrilomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato]](2-)-N4,N4',O3,O3']bis[tris(3-methoxy-3-methylbutyl)phosphine-P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

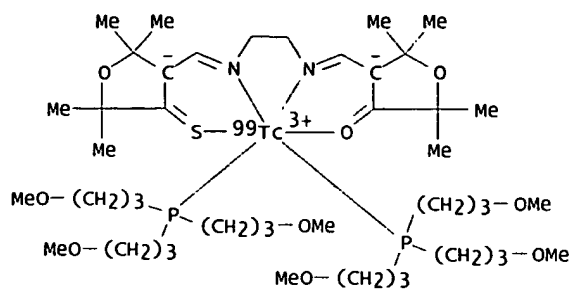
PAGE 1-A



PAGE 2-A

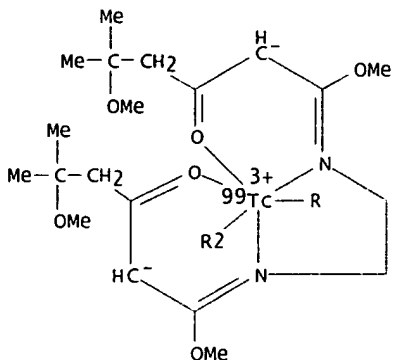


IT 143049-65-4 174529-29-4 174529-30-7  
 174529-31-8  
 RL: BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (difference imaging method for the identification of multidrug-resistant tumor cells)  
 RN 143049-65-4 HCAPLUS  
 CN Technetium(1+)-99Tc, [dihydro-2,2,5,5-tetramethyl-4-[[[2-[[[tetrahydro-2,2,5,5-tetramethyl-4-(thioxo-.kappa.S)-3-furanyl]methylene]amino-.kappa.N]ethyl]imino-.kappa.N]methyl]-3(2H)-furanonato(2-)-.kappa.O3]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-52)- (9CI) (CA INDEX NAME)

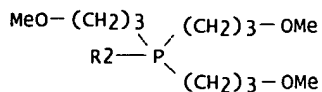
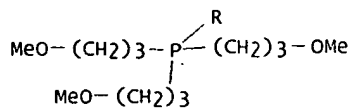


RN 174529-29-4 HCAPLUS  
 CN Technetium(1+)-99Tc, [[dimethyl N,N'-1,2-ethanediylbis[5-methoxy-5-methyl-3-oxohexanimidato]](2-)-N1,N1',O3,O3']bis[tris(3-methoxypropyl)phosphine-P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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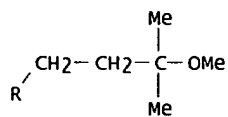
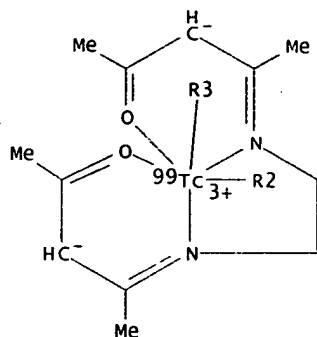


PAGE 2-A

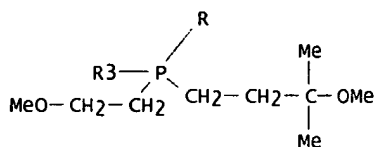
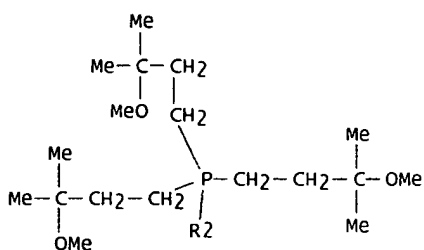


RN 174529-30-7 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4'-(1,2-ethanediyl)dinitrilo]bis[2-pentanonato]](2-)-N,N',O,O']bis[tris(3-methoxy-3-methylbutyl)phosphine-P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

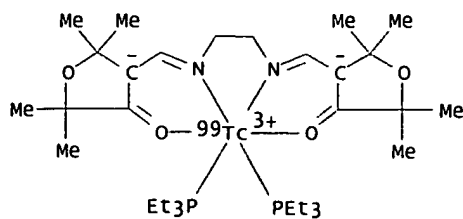
PAGE 1-A



PAGE 2-A



RN 174529-31-8 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-  
 .kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-  
 .kappa.O3]](2-)]bis(triethylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)



IT 594-09-2, Trimethylphosphine 6310-76-5  
 23288-61-1 142996-90-5 174529-21-6  
 174529-24-9 174529-25-0 174529-27-2

SEARCHED BY SUSAN HANLEY 305-4053

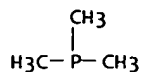
Page 57

RL: RCT (Reactant)

(difference imaging method for the identification of multidrug-resistant tumor cells)

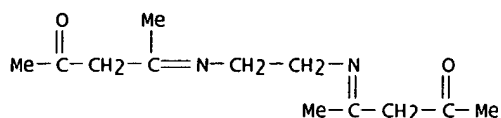
RN 594-09-2 HCAPLUS

CN Phosphine, trimethyl- (6CI, 8CI, 9CI) (CA INDEX NAME)



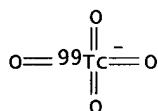
RN 6310-76-5 HCAPLUS

CN 2-Pentanone, 4,4'-(1,2-ethanediyl)dinitrilo)bis- (9CI) (CA INDEX NAME)



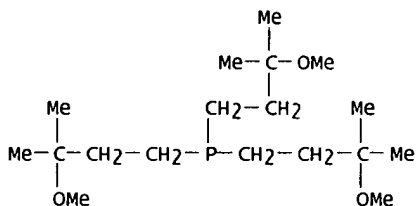
RN 23288-61-1 HCAPLUS

CN Technetate (99TcO41-), (T-4)- (9CI) (CA INDEX NAME)



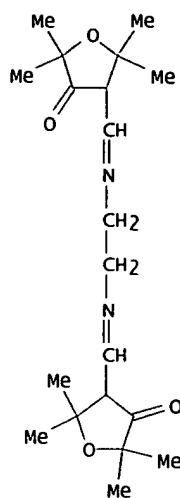
RN 142996-90-5 HCAPLUS

CN Phosphine, tris(3-methoxy-3-methylbutyl)- (9CI) (CA INDEX NAME)



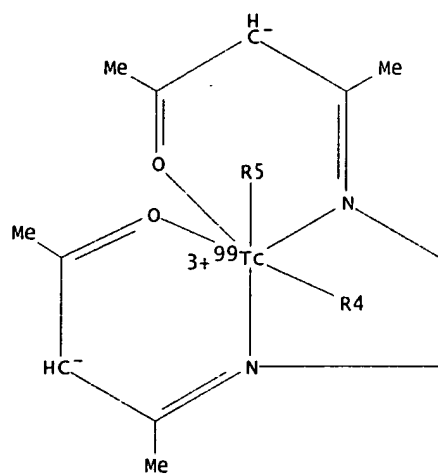
RN 174529-21-6 HCAPLUS

CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis(nitrilomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)

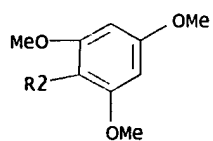
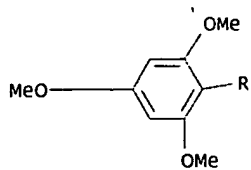


RN 174529-24-9 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4'-(1,2-ethanedithiolate)dinitrilo]bis[2-pentanonato]](2-)-N,N',O,O']bis[tris(2,4,6-trimethoxyphenyl)phosphine-P]-, (OC-6-13)-(9CI) (CA INDEX NAME)

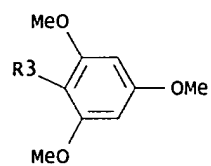
PAGE 1-A



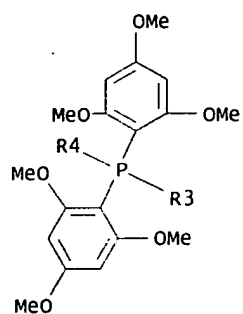
PAGE 2-A



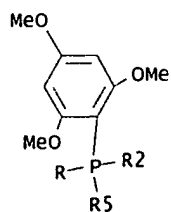
PAGE 3-A



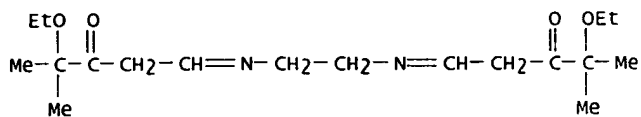
PAGE 4-A



PAGE 5-A

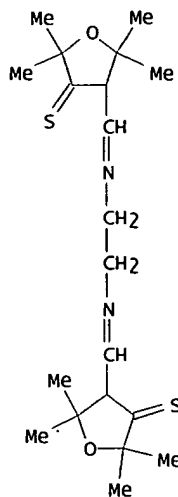


RN 174529-25-0 HCAPLUS  
 CN 3,16-Dioxa-8,11-diazaoctadeca-7,11-diene-5,14-dione, 4,4,15,15-tetramethyl-  
 (9CI) (CA INDEX NAME)



RN 174529-27-2 HCAPLUS

CN 3(2H)-Furanthione, 4,4'-[1,2-ethanediylbis(nitrilomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



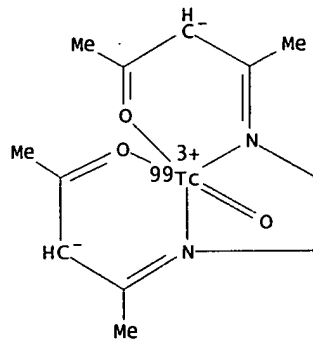
IT 107828-51-3P 174529-22-7P 174529-26-1P

174529-28-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(difference imaging method for the identification of  
multidrug-resistant tumor cells)

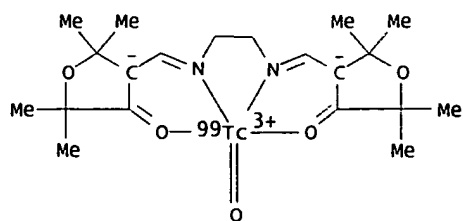
RN 107828-51-3 HCAPLUS

CN Technetium(1+)-99Tc, [[4,4'-(1,2-ethanediyl)dinitrilo]bis[2-pentanonato]](2-)-N,N',O,O']oxo-, (SP-5-23)- (9CI) (CA INDEX NAME)

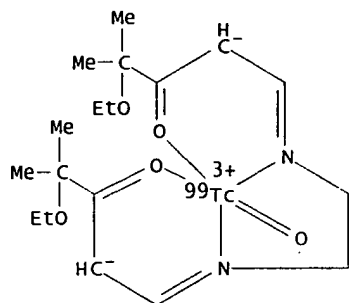


RN 174529-22-7 HCAPLUS

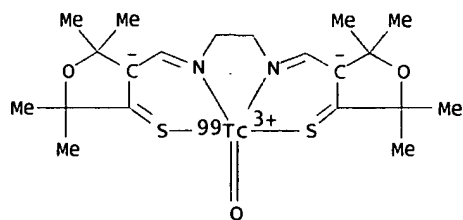
CN Technetium(1+)-99Tc, [[4,4'-(1,2-ethanediylbis(nitrilomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato]](2-)-N4,N4',O3,O3']oxo-, (SP-5-23)- (9CI) (CA INDEX NAME)



RN 174529-26-1 HCAPLUS  
 CN Technetium(1+)-99Tc, oxo[4,4,15,15-tetramethyl-3,16-dioxa-8,11-diazaoctadeca-7,11-diene-5,14-dionato(2-)-N8,N11,O5,O14]-, (SP-5-23)-(9CI) (CA INDEX NAME)



RN 174529-28-3 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis(nitrilomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanthionato]](2-)-N,N',S,S']oxo-, (SP-5-23)-(9CI) (CA INDEX NAME)



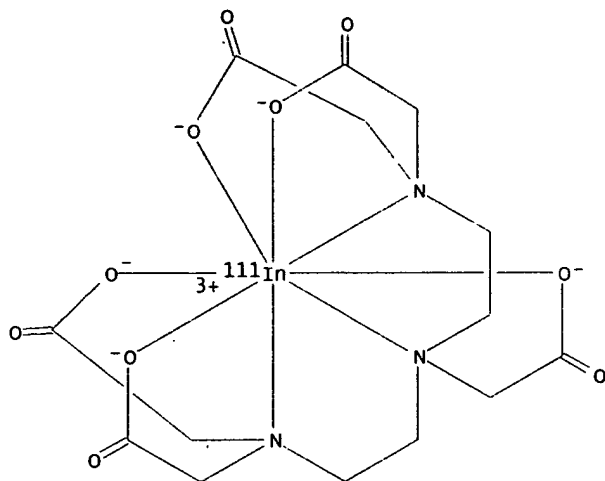
IT 15064-65-0, Thallium-201, biological studies 39400-71-0  
 63503-12-8 109581-73-9 144029-16-3  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (difference imaging method for the identification of  
 multidrug-resistant tumor cells)  
 RN 15064-65-0 HCAPLUS  
 CN Thallium, isotope of mass 201 (8CI, 9CI) (CA INDEX NAME)

201Tl

RN 39400-71-0 HCAPLUS  
 CN Indate(2-)-111In, [N,N-bis[2-[bis[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl]glycinato(5-)-.kappa.N,.kappa.O]-, dihydrogen, (SA-8-11'13'1432)-(9CI) (CA INDEX NAME)



PAGE 1-A

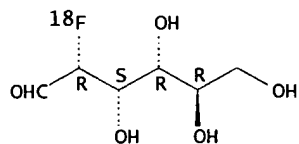


PAGE 2-A

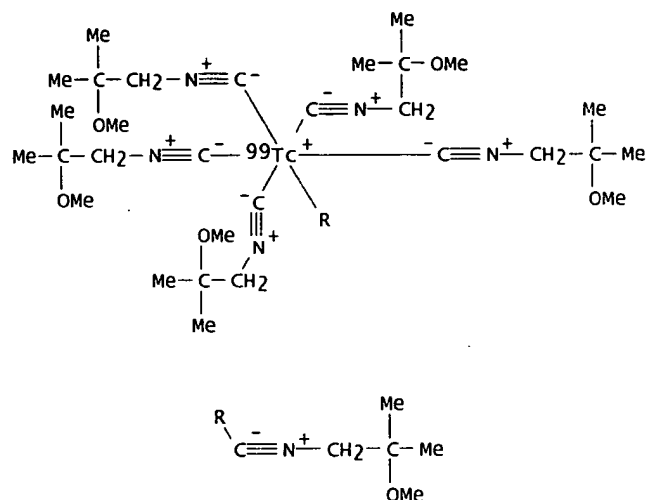
● 2 H<sup>+</sup>

RN 63503-12-8 HCAPLUS  
 CN D-Glucose, 2-deoxy-2-(fluoro-18F)- (9CI) (CA INDEX NAME)

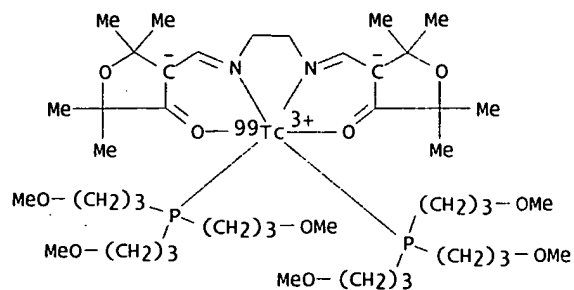
Absolute stereochemistry.



RN 109581-73-9 HCAPLUS  
 CN Technetium(1+)-99Tc, hexakis[1-(isocyano-.kappa.C)-2-methoxy-2-methylpropane]-, (OC-6-11)- (9CI) (CA INDEX NAME)



RN 144029-16-3 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediyl]bis[(nitrilo-  
 .kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-  
 .kappa.O3]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)-  
 (9CI) (CA INDEX NAME)



IT 14133-76-7, Technetium-99, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (metastable, compd. labeled with; difference imaging method for the  
 identification of multidrug-resistant tumor cells)  
 RN 14133-76-7 HCAPLUS  
 CN Technetium, isotope of mass 99 (8CI, 9CI) (CA INDEX NAME)

99Tc

FAN.CNT 1

PRAI	US	1993-40739	19930331
	WO	1994-US3389	19940329

IT 7439-89-6, Iron, biological studies 7440-47-3, Chromium, biological studies 7440-48-4, Cobalt, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(divalent; imaging radiopharmaceutical formulations having non-stannous reductants)

Fe

Cr

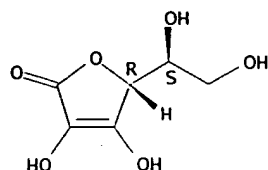
Co

SEARCHED BY SUSAN HANLEY 305-4053

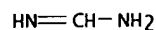
biological studies 7803-51-2, Phosphine 10043-35-3,  
Boric acid (H3BO3), biological studies 14844-07-6, Dithionite  
14901-63-4, Phosphite 15460-68-1, Hypophosphite  
15460-71-6 15498-68-7 83622-85-9,  
Tris(3-methoxypropyl)phosphine  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(imaging radiopharmaceutical formulations having non-stannous  
reductants)

RN 50-81-7 HCAPLUS  
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

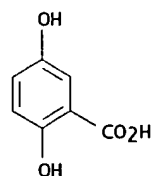
Absolute stereochemistry.



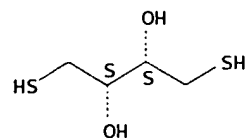
RN 463-52-5 HCAPLUS  
CN Methanimidamide (9CI) (CA INDEX NAME)



RN 490-79-9 HCAPLUS  
CN Benzoic acid, 2,5-dihydroxy- (9CI) (CA INDEX NAME)



RN 3483-12-3 HCAPLUS  
CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (9CI) (CA INDEX NAME)



RN 7440-31-5 HCAPLUS  
CN Tin (8CI, 9CI) (CA INDEX NAME)

Sn

RN 7440-66-6 HCAPLUS  
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

RN 7440-67-7 HCAPLUS  
CN Zirconium (8CI, 9CI) (CA INDEX NAME)

Zr

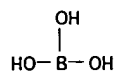
RN 7647-01-0 HCAPLUS  
CN Hydrochloric acid (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

HCl

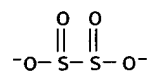
RN 7803-51-2 HCAPLUS  
CN Phosphine (6CI, 8CI, 9CI) (CA INDEX NAME)

PH<sub>3</sub>

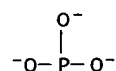
RN 10043-35-3 HCAPLUS  
CN Boric acid (H<sub>3</sub>BO<sub>3</sub>) (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 14844-07-6 HCAPLUS  
CN Dithionite (8CI, 9CI) (CA INDEX NAME)



RN 14901-63-4 HCAPLUS  
CN Phosphite (8CI, 9CI) (CA INDEX NAME)



RN 15460-68-1 HCAPLUS  
CN Phosphinic acid, ion(1-) (9CI) (CA INDEX NAME)

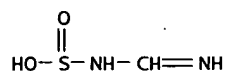


RN 15460-71-6 HCAPLUS  
CN Phosphonic acid, ion(1-) (8CI, 9CI) (CA INDEX NAME)

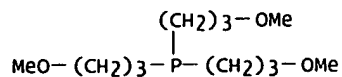


\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

RN 15498-68-7 HCAPLUS  
CN Amidosulfurous acid, (aminomethylene)- (9CI) (CA INDEX NAME)



RN 83622-85-9 HCAPLUS  
CN Phosphine, tris(3-methoxypropyl)- (9CI) (CA INDEX NAME)



CEPERLEY 09/576,960

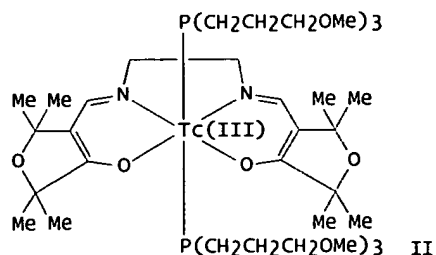
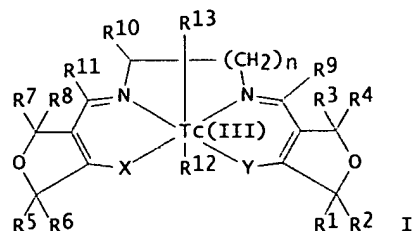
IT 7440-50-8, Copper, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(mono- and divalent; imaging radiopharmaceutical formulations having  
non-stannous reductants)  
RN 7440-50-8 HCAPLUS  
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

=&gt; d bib abs hitstr 126 7

L26 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1992:612720 HCAPLUS  
 DN 117:212720  
 TI Preparation of  $^{99m}\text{Tc}(\text{III})$  complexes with bis(aminoalkylfuranone)  
 and phosphine ligands as myocardial imaging agents  
 IN Woulfe, Steven R.; Deutsch, Edward A.; Dyszlewski, Mary M.;  
 Neumann, William L.  
 PA Mallinckrodt Medical, Inc., USA  
 SO U.S., 12 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5112594	A	19920512	US 1991-680446	19910404
	CA 2097081	AA	19920622	CA 1991-2097081	19911220
	WO 9211040	A2	19920709	WO 1991-US9617	19911220
	WO 9211040	A3	19921015		
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
	AU 9211514	A1	19920722	AU 1992-11514	19911220
	AU 665181	B2	19951221		
	EP 563328	A1	19931006	EP 1992-904668	19911220
	EP 563328	B1	19990630		
PRAI	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
	JP 06504063	T2	19940512	JP 1991-504375	19911220
	AT 181673	E	19990715	AT 1992-904668	19911220
	IL 116602	A1	19970218	IL 1991-116602	19911225
	US 1990-632285		19901221		
	US 1991-680446		19910404		
	WO 1991-US9617		19911220		
	IL 1991-100500		19911225		
	OS	MARPAT 117:212720			
	GI				



AB Title compds. [I; R1 - R11 = H, OH, (ester, ether, amide, ketone, aldehyde, nitrile group-contg.) alkyl; R12, R13 =  $\text{PR}_{14}\text{R}_{15}\text{R}_{16}$ ; R14 - R16 = H, alkyl, ether group, alkylaryl, dioxarylalkyl; X, Y = O, S], were prepd. Thus, 2,5-dimethyl-3-hexyne-2,5-diol was heated with HgO and  $\text{H}_2\text{SO}_4$  in  $\text{H}_2\text{O}$  to give 89% dihydro-2,2,5,5-tetramethyl-3(2H)furanone. The latter in  $\text{Et}_2\text{O}$  was added to a mixt. of NaH,  $\text{EtO}_2\text{CCH}_3$ , and trace  $\text{EtOH}$  in  $\text{Et}_2\text{O}$  at 0.degree. and the mixt. was stirred overnight to give 79% 4-hydroxymethylenedihydro-

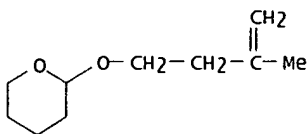
SEARCHED BY SUSAN HANLEY 305-4053

2,2,5,5-tetramethyl-3(2H)-furanone. The latter was refluxed with  $\text{H}_2\text{NCH}_2\text{CH}_2\text{NH}_2$  in THF to give 76% 1,2-bis(dihydro-2,2,5,5-tetramethyl-13(2H)-furanone-4-methyleneamino)ethane. This in EtOH was treated successively with  $99\text{mTcO}_4^-$  in saline, 1 M KOH,  $\text{SnCl}_2$  in EtOH,  $(\text{MeOCH}_2\text{CH}_2\text{CH}_2)_3\text{P}$  (prepn. from 1,3-propanediol given) and 1 M HCl to give title compd. II in 90% radiochem. purity. I showed 0.8-1.1% heart uptake in guinea pigs 5-60 min after administration. I have high myocardial uptake combined with exceptionally rapid hepatobiliary clearance and extensive renal clearance to provide near ideal myocardial images in humans.

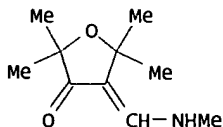
IT 36865-38-0P, 1-Chloro-3-ethoxypropane 55975-11-6P  
 83186-31-6P 142996-77-8P 142996-78-9P  
 142996-81-4P 142996-84-7P 143016-66-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of, as intermediate for ligand for technetium  
 myocardial imaging agent)  
 RN 36865-38-0 HCAPLUS  
 CN Propane, 1-chloro-3-ethoxy- (9CI) (CA INDEX NAME)

$\text{Cl}-(\text{CH}_2)_3-\text{O}-\text{Et}$

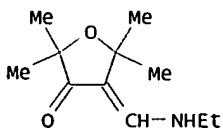
RN 55975-11-6 HCAPLUS  
 CN 2H-Pyran, tetrahydro-2-[(3-methyl-3-butenyl)oxy]- (9CI) (CA INDEX NAME)



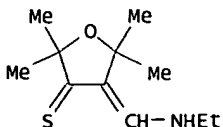
RN 83186-31-6 HCAPLUS  
 CN 3(2H)-Furanone, dihydro-2,2,5,5-tetramethyl-4-[(methylamino)methylene]-  
 (9CI) (CA INDEX NAME)



RN 142996-77-8 HCAPLUS  
 CN 3(2H)-Furanone, 4-[(ethylamino)methylene]dihydro-2,2,5,5-tetramethyl-  
 (9CI) (CA INDEX NAME)

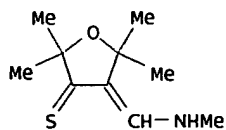


RN 142996-78-9 HCAPLUS  
 CN 3(2H)-Furanthione, 4-[(ethylamino)methylene]dihydro-2,2,5,5-tetramethyl-  
 (9CI) (CA INDEX NAME)

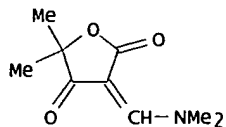


RN 142996-81-4 HCAPLUS  
 CN 3(2H)-Furanthione, dihydro-2,2,5,5-tetramethyl-4-[(methylamino)methylene]-  
 (9CI) (CA INDEX NAME)

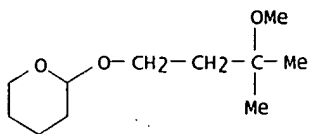




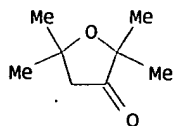
RN 142996-84-7 HCAPLUS  
CN 2,4(3H,5H)-Furandione, 3-[(dimethylamino)methylene]-5,5-dimethyl- (9CI)  
(CA INDEX NAME)



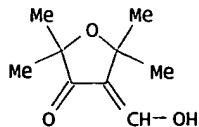
RN 143016-66-4 HCAPLUS  
CN 2H-Pyran, tetrahydro-2-(3-methoxy-3-methylbutoxy)- (9CI) (CA INDEX NAME)



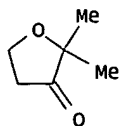
IT 5455-94-7P 7441-66-9P 52662-40-5P  
142996-69-8P 142996-71-2P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, as intermediates for ligand for technetium  
myocardial imaging agent)  
RN 5455-94-7 HCAPLUS  
CN 3(2H)-Furanone, dihydro-2,2,5,5-tetramethyl- (6CI, 7CI, 8CI, 9CI) (CA  
INDEX NAME)



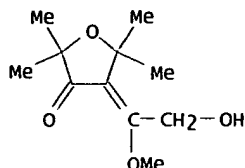
RN 7441-66-9 HCAPLUS  
CN 3(2H)-Furanone, dihydro-4-(hydroxymethylene)-2,2,5,5-tetramethyl- (6CI,  
7CI, 8CI, 9CI) (CA INDEX NAME)



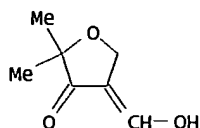
RN 52662-40-5 HCAPLUS  
CN 3(2H)-Furanone, dihydro-2,2-dimethyl- (9CI) (CA INDEX NAME)



RN 142996-69-8 HCAPLUS  
 CN 3(2H)-Furanone, dihydro-4-(2-hydroxy-1-methoxyethylidene)-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)

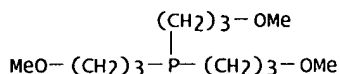


RN 142996-71-2 HCAPLUS  
 CN 3(2H)-Furanone, dihydro-4-(hydroxymethylene)-2,2-dimethyl- (9CI) (CA INDEX NAME)

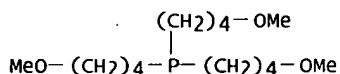


IT 83622-85-9P, Tris(3-methoxypropyl)phosphine 142996-87-0P, Tris(4-methoxybutyl)phosphine 142996-88-1P, Tris(3-ethoxypropyl)phosphine 142996-89-2P, Tris(2-methoxyethoxymethyl)phosphine 142996-90-5P, Tris(3-methoxy-3-methylbutyl)phosphine 142996-92-7P, 3-Methoxypropyldimethylphosphine 142996-93-8P, Bis(3-methoxypropyl)methylphosphine  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of, as ligand for technetium myocardial imaging agent)

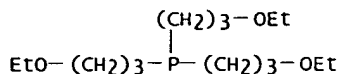
RN 83622-85-9 HCAPLUS  
 CN Phosphine, tris(3-methoxypropyl)- (9CI) (CA INDEX NAME)



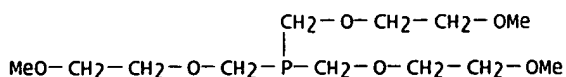
RN 142996-87-0 HCAPLUS  
 CN Phosphine, tris(4-methoxybutyl)- (9CI) (CA INDEX NAME)



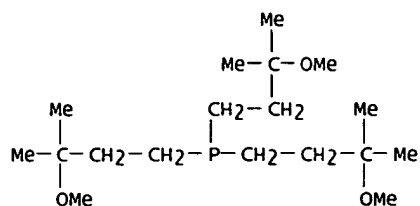
RN 142996-88-1 HCAPLUS  
 CN Phosphine, tris(3-ethoxypropyl)- (9CI) (CA INDEX NAME)



RN 142996-89-2 HCAPLUS  
 CN 2,5,9,12-Tetraoxa-7-phosphatridecane, 7-[(2-methoxyethoxy)methyl]- (9CI) (CA INDEX NAME)



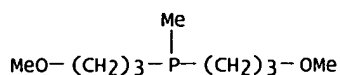
RN 142996-90-5 HCAPLUS  
 CN Phosphine, tris(3-methoxy-3-methylbutyl)- (9CI) (CA INDEX NAME)



RN 142996-92-7 HCAPLUS  
CN Phosphine, (3-methoxypropyl)dimethyl- (9CI) (CA INDEX NAME)

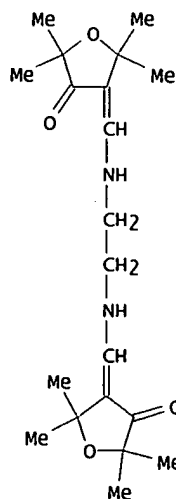
MeO-(CH<sub>2</sub>)<sub>3</sub>-PMe<sub>2</sub>

RN 142996-93-8 HCAPLUS  
CN Phosphine, bis(3-methoxypropyl)methyl- (9CI) (CA INDEX NAME)

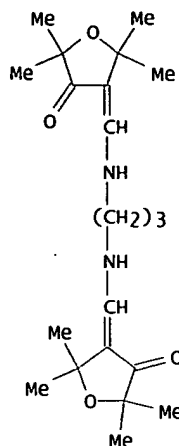


IT 142996-66-5P 142996-67-6P 142996-68-7P  
142996-72-3P 142996-73-4P 142996-74-5P  
143785-24-4P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, as ligand for technetium myocardial imaging agents)

RN 142996-66-5 HCAPLUS  
CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)

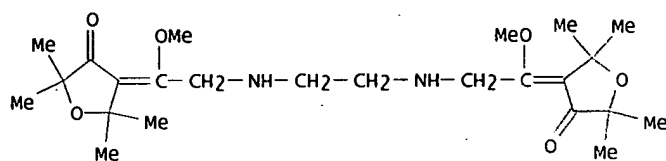


RN 142996-67-6 HCAPLUS  
CN 3(2H)-Furanone, 4,4'-[1,3-propanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



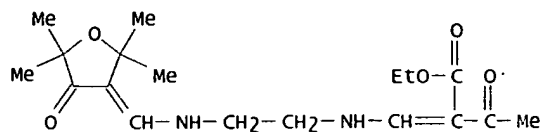
RN 142996-68-7 HCAPLUS

CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis[imino(1-methoxy-2-ethanyl)-1-ylidene]]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



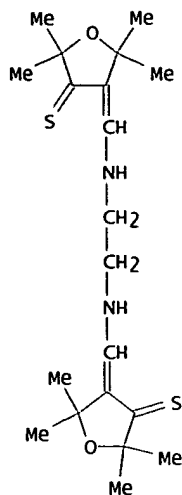
RN 142996-72-3 HCAPLUS

CN Butanoic acid, 2-[[[2-[[[(dihydro-2,2,5,5-tetramethyl-4-oxo-3(2H)-furan-1-ylidene)methyl]amino]ethyl]amino]methylene]-3-oxo-, ethyl ester (9CI) (CA INDEX NAME)

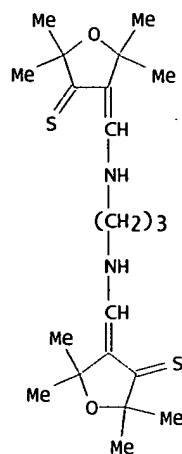


RN 142996-73-4 HCAPLUS

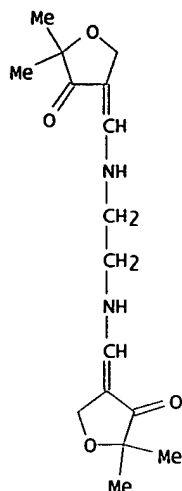
CN 3(2H)-Furanthione, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



RN 142996-74-5 HCAPLUS  
 CN 3(2H)-Furanthione, 4,4'-[1,3-propanediylbis(iminomethylidene)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)]



RN 143785-24-4 HCAPLUS  
 CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis(iminomethylidene)]bis[dihydro-2,2-dimethyl- (9CI) (CA INDEX NAME)]

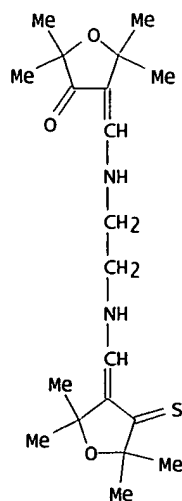


IT 142996-76-7P 142996-79-0P 142996-82-5P  
142996-83-6P 142996-85-8P 143785-25-5P  
143785-26-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, as ligand for technetium of myocardial imaging agent)

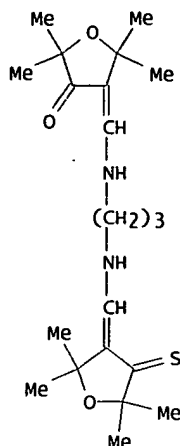
RN 142996-76-7 HCAPLUS

142950-70-7 ACAPLO3  
3(2H)-Furanone, 4-[[[2-[(dihydro-2,2,5,5-tetramethyl-4-thioxo-3(2H)-  
furylidenemethyl]amino]ethyl]amino]methylene]dihydro-2,2,5,5-  
tetramethyl- (9CI) (CA INDEX NAME)



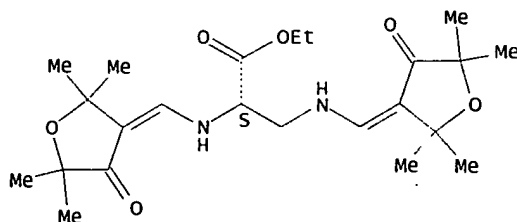
RN 142996-79-0 HCAPLUS

142550-75-0 NCIC# 142550-75-0  
CN 3(2H)-Furanone, 4-[[[3-[[[(dihydro-2,2,5,5-tetramethyl-4-thioxo-3(2H)-furan-2-ylidene)methyl]amino]propyl]amino]methylene]dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)

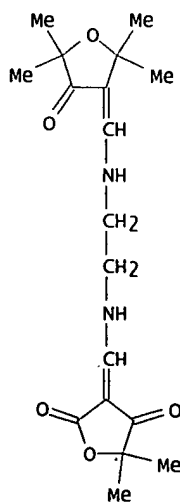


RN 142996-82-5 HCAPLUS  
 CN L-Alanine, N-[(dihydro-2,2,5,5-tetramethyl-4-oxo-3(2H)-  
 furanylidene)methyl]-3-[[[(dihydro-2,2,5,5-tetramethyl-4-oxo-3(2H)-  
 furanylidene)methyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry unknown.

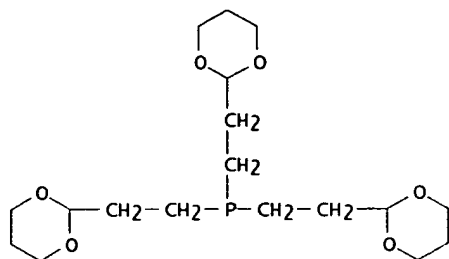


RN 142996-83-6 HCAPLUS  
 CN 2,4(3H,5H)-Furandione, 3-[[[2-[[[(dihydro-2,2,5,5-tetramethyl-4-oxo-3(2H)-  
 furanylidene)methyl]amino]ethyl]amino]methylene]-5,5-dimethyl- (9CI) (CA  
 INDEX NAME)

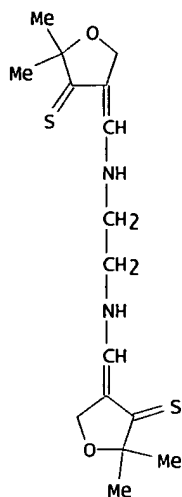


RN 142996-85-8 HCAPLUS  
 CN Phosphine, tris[2-(1,3-dioxan-2-yl)ethyl]- (9CI) (CA INDEX NAME)

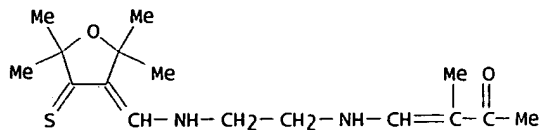
SEARCHED BY SUSAN HANLEY 305-4053



RN 143785-25-5 HCAPLUS  
 CN 3(2H)-Furanthione, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2-dimethyl- (9CI) (CA INDEX NAME)

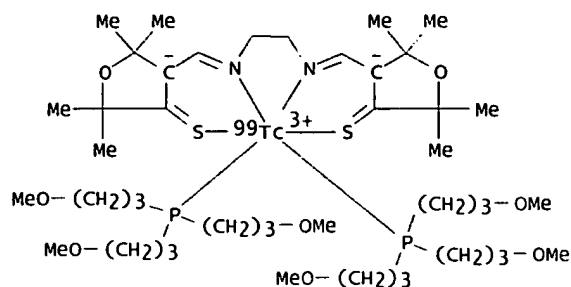


RN 143785-26-6 HCAPLUS  
 CN 3-Buten-2-one, 4-[[2-[[[(dihydro-2,2,5,5-tetramethyl-3-thioxo-3(2H)-furan-2-ylidene)methyl]amino]ethyl]amino]-3-methyl- (9CI) (CA INDEX NAME)

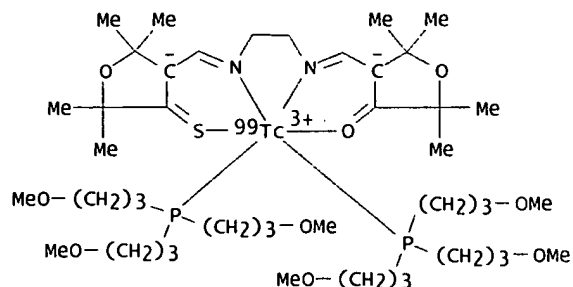


IT 143049-63-2P 143049-65-4P 144029-16-3P  
 144125-31-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of, as myocardial imaging agent)  
 RN 143049-63-2 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrido-  
 .kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanthionato-  
 .kappa.S3]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-33)-  
 (9CI) (CA INDEX NAME)

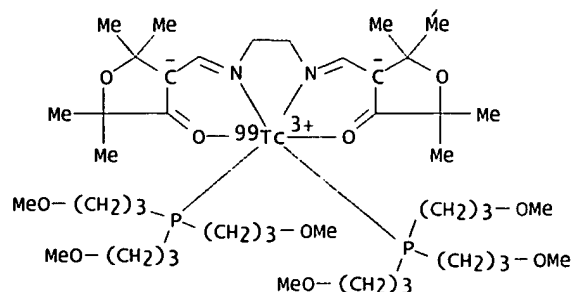




RN 143049-65-4 HCAPLUS  
 CN Technetium(1+)-99Tc, [dihydro-2,2,5,5-tetramethyl-4-[[[2-[[[tetrahydro-2,2,5,5-tetramethyl-4-(thioxo-.kappa.S)-3-furanyl]methylene]amino-.kappa.N]ethyl]imino-.kappa.N]methyl]-3(2H)-furanonato(2-)-.kappa.O3]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-52)- (9CI)  
 (CA INDEX NAME)

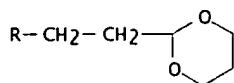
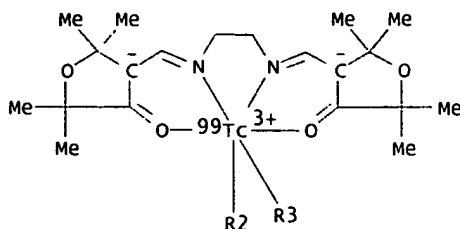


RN 144029-16-3 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediyl]bis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

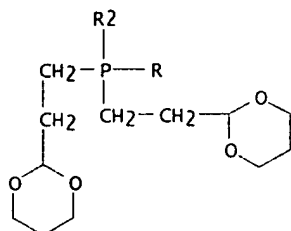


RN 144125-31-5 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediyl]bis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis[tris[2-(1,3-dioxan-2-yl)ethyl]phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

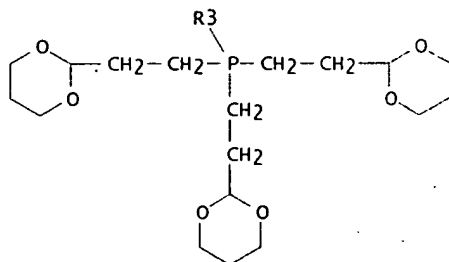
PAGE 1-A



PAGE 2-A



PAGE 3-A



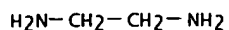
IT 74-89-5, Methylamine, reactions 107-15-3,  
 Ethylenediamine, reactions 109-76-2, 1,3-Propylenediamine  
 109-94-4, Ethyl formate 123-54-6, Acetylacetone,  
 reactions 142-30-3, 2,5-Dimethyl-3-hexyne-2,5-diol  
 3788-94-1, Ethyl 2-ethoxymethylene-3-oxobutanoate  
 6290-49-9, Methyl methoxyacetate 22621-30-3,  
 5,5-Dimethyltetronic acid 33884-43-4, 2-(2-Bromoethyl)-1,3-  
 dioxane 35298-48-7, 2,2-Dimethyl-3(2H)-furanone  
 143119-70-4, Ethyl (2S)-2,3-diaminopropanoate dihydrochloride  
 RL: RCT (Reactant)  
 (reaction of, in prepn. of ligand for technetium myocardial  
 imaging agent)  
 RN 74-89-5 HCAPLUS  
 CN Methanamine (9CI) (CA INDEX NAME)

H<sub>3</sub>C-NH<sub>2</sub>

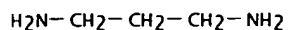
RN 107-15-3 HCAPLUS  
 CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)

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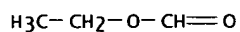
Page 80



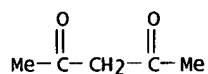
RN 109-76-2 HCAPLUS  
CN 1,3-Propanediamine (6CI, 8CI, 9CI) (CA INDEX NAME)



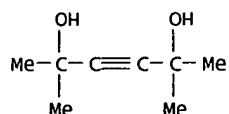
RN 109-94-4 HCAPLUS  
CN Formic acid, ethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



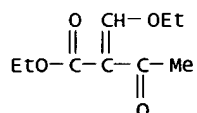
RN 123-54-6 HCAPLUS  
CN 2,4-Pentanedione (8CI, 9CI) (CA INDEX NAME)



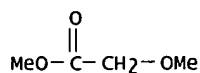
RN 142-30-3 HCAPLUS  
CN 3-Hexyne-2,5-diol, 2,5-dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



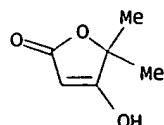
RN 3788-94-1 HCAPLUS  
CN Butanoic acid, 2-(ethoxymethylene)-3-oxo-, ethyl ester (9CI) (CA INDEX NAME)



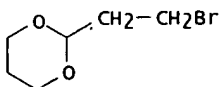
RN 6290-49-9 HCAPLUS  
CN Acetic acid, methoxy-, methyl ester (7CI, 8CI, 9CI) (CA INDEX NAME)



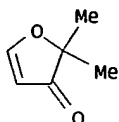
RN 22621-30-3 HCAPLUS  
CN 2(5H)-Furanone, 4-hydroxy-5,5-dimethyl- (8CI, 9CI) (CA INDEX NAME)



RN 33884-43-4 HCAPLUS  
CN 1,3-Dioxane, 2-(2-bromoethyl)- (9CI) (CA INDEX NAME)

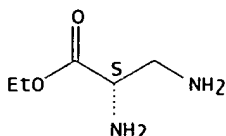


RN 35298-48-7 HCAPLUS  
CN 3(2H)-Furanone, 2,2-dimethyl- (9CI) (CA INDEX NAME)



RN 143119-70-4 HCAPLUS  
CN L-Alanine, 3-amino-, ethyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



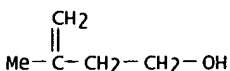
● 2 HCl

IT 111-35-3, 3-Ethoxypropanol 763-32-6 1498-42-6  
3970-21-6, 2-Methoxyethoxymethyl chloride 17913-18-7,  
1-Chloro-4-methoxybutane 18742-02-4 143907-66-8  
RL: RCT (Reactant)  
(reaction of, in prepn. of technetium myocardial imaging agent)

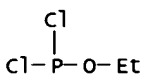
RN 111-35-3 HCAPLUS  
CN 1-Propanol, 3-ethoxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

HO-(CH<sub>2</sub>)<sub>3</sub>-OEt

RN 763-32-6 HCAPLUS  
CN 3-Buten-1-ol, 3-methyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 1498-42-6 HCAPLUS  
CN Phosphorodichloridous acid, ethyl ester (8CI, 9CI) (CA INDEX NAME)



RN 3970-21-6 HCAPLUS  
CN Ethane, 1-(chloromethoxy)-2-methoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)

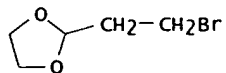
MeO-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>Cl

RN 17913-18-7 HCAPLUS  
CN Butane, 1-chloro-4-methoxy- (9CI) (CA INDEX NAME)

Cl-(CH<sub>2</sub>)<sub>4</sub>-O-Me

RN 18742-02-4 HCAPLUS

CN 1,3-Dioxolane, 2-(2-bromoethyl)- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 143907-66-8 HCAPLUS

CN Copper(1+), tetrakis[tris(3-methoxypropyl)phosphine-P]-, (T-4)-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

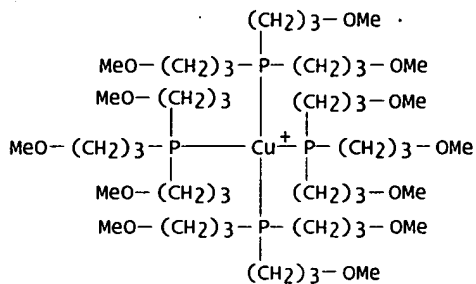
CM 1

CRN 143907-65-7

CMF C48 H108 Cu O12 P4

CCI CCS

CDES 7:T-4

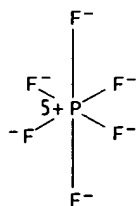


CM 2

CRN 16919-18-9

CMF F6 P

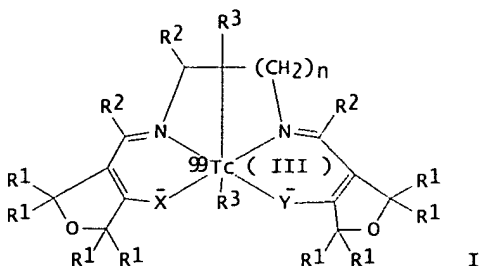
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L26 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1992:507442 HCAPLUS  
 DN 117:107442  
 TI Technetium(III)-99m myocardial imaging agents and method of use  
 IN Woulfe, Steven R.; Deutsch, Edward A.; Dyszlewski, Mary M.;  
 Neumann, William L.  
 PA Mallinckrodt Medical, Inc., USA  
 SO U.S., 12 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5112595	A	19920512	US 1990-632285	19901221
	CA 2097081	AA	19920622	CA 1991-2097081	19911220
	WO 9211040	A2	19920709	WO 1991-US9617	19911220
	WO 9211040	A3	19921015		
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
	AU 9211514	A1	19920722	AU 1992-11514	19911220
	AU 665181	B2	19951221		
	EP 563328	A1	19931006	EP 1992-904668	19911220
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	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
	JP 06504063	T2	19940512	JP 1991-504375	19911220
	AT 181673	E	19990715	AT 1992-904668	19911220
	IL 100500	A1	19961031	IL 1991-100500	19911225
	IL 116602	A1	19970218	IL 1991-116602	19911225
PRAI	US 1990-632285		19901221		
	US 1991-680446		19910404		
	WO 1991-US9617		19911220		
	IL 1991-100500		19911225		
OS	MARPAT 117:107442				
GI					



AB Myocardial imaging agents [I; R1, R2 = H, OH, (hydroxy)alkyl, ether, ester, amide, ketone, aldehyde, nitrile; X, Y = O, S; R3 = PR4(R5)2; R4 = H, R5; R5 = alkyl, ether, alkylaryl, dioxanylalkyl; n = 1, 2] comprise a 99mTc(III) complex ligated in a planar position by a tetradentate ligand and in the axial positions by phosphines. I exhibit improved biodistribution, improved labeling, and extremely rapid blood clearance following i.v. administration to humans. I show high myocardial uptake accompanied with exceptionally rapid hepatobiliary clearance and extensive renal clearance to give sufficiently high heart/liver and heart/lung ratios to provide nearly ideal myocardial images in humans. Thus, 2,5-dimethyl-3-hexyne-2,5-diol was heated with HgO and dil. H2SO4 to form dihydro-2,2,5,5-tetramethyl-3(2H)-furanone, which was further converted in 2 steps to 1,2-bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanone-4-methyleneamino]ethane (II). II was complexed with 99mTc(III) by reaction with 99mTcO4- and SnCl2 and the product was complexed with tris(3-methoxypropyl)phosphine.

IT 3970-21-6, 2-Methoxyethoxymethyl chloride 17913-18-7, 1-Chloro-4-methoxybutane 18742-02-4, 2-(2-Bromoethyl)-1,3-dioxolane 33884-43-4, 2-(2-Bromoethyl)-1,3-dioxane

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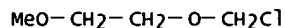
36865-38-0, 1-Chloro-3-ethoxypropane

RL: RCT (Reactant)

(Grignard reaction of, with phosphorus trichloride)

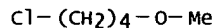
RN 3970-21-6 HCAPLUS

CN Ethane, 1-(chloromethoxy)-2-methoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)



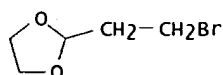
RN 17913-18-7 HCAPLUS

CN Butane, 1-chloro-4-methoxy- (9CI) (CA INDEX NAME)



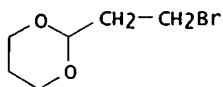
RN 18742-02-4 HCAPLUS

CN 1,3-Dioxolane, 2-(2-bromoethyl)- (6CI, 8CI, 9CI) (CA INDEX NAME)



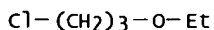
RN 33884-43-4 HCAPLUS

CN 1,3-Dioxane, 2-(2-bromoethyl)- (9CI) (CA INDEX NAME)



RN 36865-38-0 HCAPLUS

CN Propane, 1-chloro-3-ethoxy- (9CI) (CA INDEX NAME)



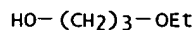
IT 111-35-3, 3-Ethoxypropanol

RL: RCT (Reactant)

(chlorination of)

RN 111-35-3 HCAPLUS

CN 1-Propanol, 3-ethoxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



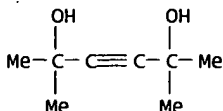
IT 142-30-3, 2,5-Dimethyl-3-hexyne-2,5-diol

RL: BIOL (Biological study)

(cyclooxidn. of)

RN 142-30-3 HCAPLUS

CN 3-Hexyne-2,5-diol, 2,5-dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



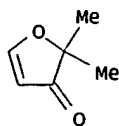
IT 35298-48-7, 2,2-Dimethyl-3(2H)-furanone

RL: RCT (Reactant)

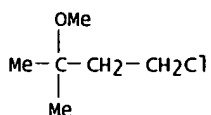
(hydrogenation of)

RN 35298-48-7 HCAPLUS

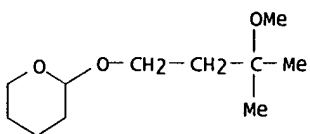
CN 3(2H)-Furanone, 2,2-dimethyl- (9CI) (CA INDEX NAME)



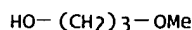
IT 142996-91-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and Grignard reaction of, with phosphorus trichloride)  
 RN 142996-91-6 HCAPLUS  
 CN Butane, 1-chloro-3-methoxy-3-methyl- (9CI) (CA INDEX NAME)



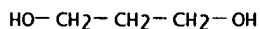
IT 143016-66-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and chlorination and deblocking of)  
 RN 143016-66-4 HCAPLUS  
 CN 2H-Pyran, tetrahydro-2-(3-methoxy-3-methylbutoxy)- (9CI) (CA INDEX NAME)



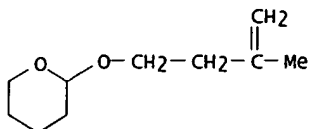
IT 1589-49-7P, 3-Methoxypropanol  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and chlorination of)  
 RN 1589-49-7 HCAPLUS  
 CN 1-Propanol, 3-methoxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT 504-63-2P, 1,3-Propanediol  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and methylation of)  
 RN 504-63-2 HCAPLUS  
 CN 1,3-Propanediol (8CI, 9CI) (CA INDEX NAME)



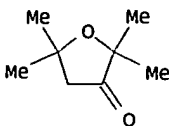
IT 55975-11-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and oxidn. of)  
 RN 55975-11-6 HCAPLUS  
 CN 2H-Pyran, tetrahydro-2-[(3-methyl-3-butenyl)oxy]- (9CI) (CA INDEX NAME)



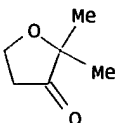
IT 5455-94-7P 52662-40-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and reaction with Et formate)  
 RN 5455-94-7 HCAPLUS



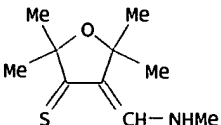
CN 3(2H)-Furanone, dihydro-2,2,5,5-tetramethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 52662-40-5 HCAPLUS  
CN 3(2H)-Furanone, dihydro-2,2-dimethyl- (9CI) (CA INDEX NAME)



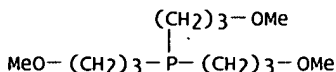
IT 142996-81-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and reaction with acetylacetone and ethylenediamine)  
RN 142996-81-4 HCAPLUS  
CN 3(2H)-Furanthione, dihydro-2,2,5,5-tetramethyl-4-[(methylamino)methylene]- (9CI) (CA INDEX NAME)



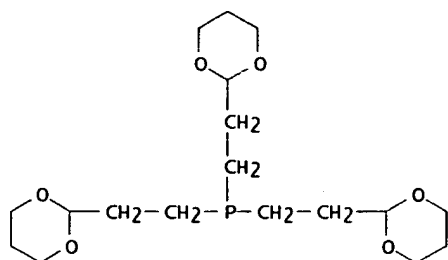
IT 36215-07-3P, 1-Chloro-3-methoxypropane  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and reaction with dichloroethoxyphosphonite)  
RN 36215-07-3 HCAPLUS  
CN Propane, 1-chloro-3-methoxy- (9CI) (CA INDEX NAME)

Cl-(CH<sub>2</sub>)<sub>3</sub>-O-Me

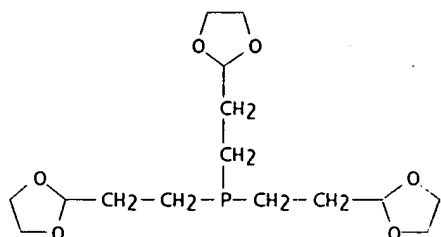
IT 83622-85-9P 142996-85-8P 142996-86-9P  
142996-87-0P 142996-88-1P 142996-89-2P  
142996-90-5P 142996-92-7P 142996-93-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and reaction with dihydrofuranone deriv. and technetium)  
RN 83622-85-9 HCAPLUS  
CN Phosphine, tris(3-methoxypropyl)- (9CI) (CA INDEX NAME)



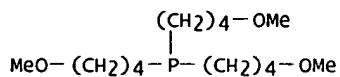
RN 142996-85-8 HCAPLUS  
CN Phosphine, tris[2-(1,3-dioxan-2-yl)ethyl]- (9CI) (CA INDEX NAME)



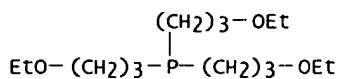
RN 142996-86-9 HCAPLUS  
CN Phosphine, tris[2-(1,3-dioxolan-2-yl)ethyl]- (9CI) (CA INDEX NAME)



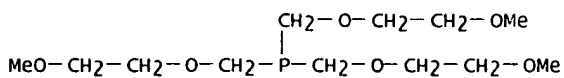
RN 142996-87-0 HCAPLUS  
CN Phosphine, tris(4-methoxybutyl)- (9CI) (CA INDEX NAME)



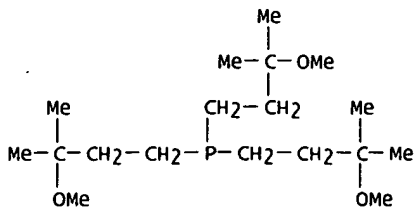
RN 142996-88-1 HCAPLUS  
CN Phosphine, tris(3-ethoxypropyl)- (9CI) (CA INDEX NAME)



RN 142996-89-2 HCAPLUS  
CN 2,5,9,12-Tetraoxa-7-phosphatridecane, 7-[(2-methoxyethoxy)methyl]- (9CI)  
(CA INDEX NAME)



RN 142996-90-5 HCAPLUS  
CN Phosphine, tris(3-methoxy-3-methylbutyl)- (9CI) (CA INDEX NAME)



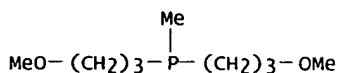
RN 142996-92-7 HCAPLUS

CN Phosphine, (3-methoxypropyl)dimethyl- (9CI) (CA INDEX NAME)

MeO-(CH<sub>2</sub>)<sub>3</sub>-PMe<sub>2</sub>

RN 142996-93-8 HCAPLUS

CN Phosphine, bis(3-methoxypropyl)methyl- (9CI) (CA INDEX NAME)



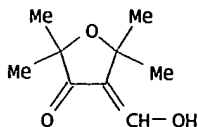
IT 7441-66-9P 142996-69-8P 142996-71-2P

142996-78-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and reaction with ethylenediamine)

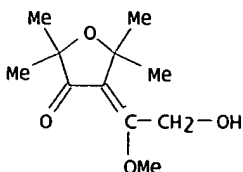
RN 7441-66-9 HCAPLUS

CN 3(2H)-Furanone, dihydro-4-(hydroxymethylene)-2,2,5,5-tetramethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



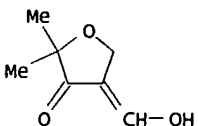
RN 142996-69-8 HCAPLUS

CN 3(2H)-Furanone, dihydro-4-(2-hydroxy-1-methoxyethylidene)-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



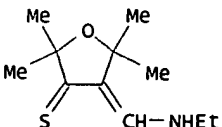
RN 142996-71-2 HCAPLUS

CN 3(2H)-Furanone, dihydro-4-(hydroxymethylene)-2,2-dimethyl- (9CI) (CA INDEX NAME)



RN 142996-78-9 HCAPLUS

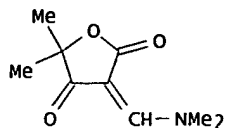
CN 3(2H)-Furanthione, 4-[(ethylamino)methylene]dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



IT 142996-84-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and reaction with ethylenediamine and hydroxymethylene-furanone deriv.)

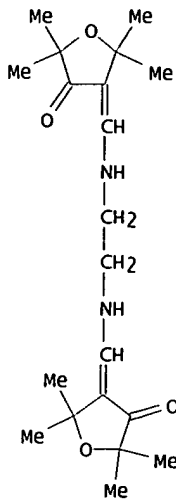
RN 142996-84-7 HCAPLUS  
 CN 2,4(3H,5H)-Furandione, 3-[(dimethylamino)methylene]-5,5-dimethyl- (9CI)  
 (CA INDEX NAME)



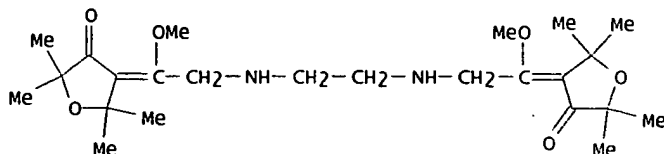
IT 142996-66-5P 142996-67-6P 142996-68-7P  
 142996-72-3P 142996-73-4P 142996-74-5P  
 142996-76-7P 142996-79-0P 142996-80-3P  
 142996-82-5P 142996-83-6P 143785-24-4P  
 143785-25-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and reaction with phosphine deriv. and technetium)

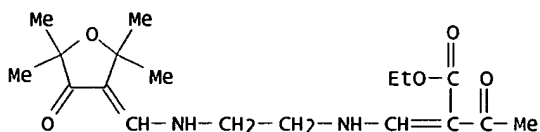
RN 142996-66-5 HCAPLUS  
 CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



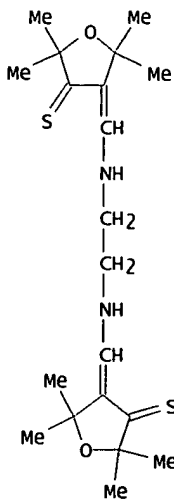
RN 142996-68-7 HCAPLUS  
 CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis[imino(1-methoxy-2-ethyl-1-ylidene)]]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



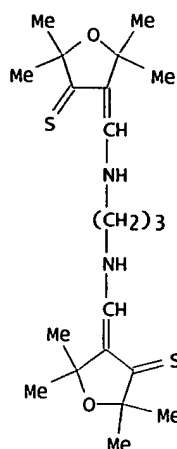
RN 142996-72-3 HCAPLUS  
 CN Butanoic acid, 2-[[[2-[[[(dihydro-2,2,5,5-tetramethyl-4-oxo-3(2H)-furanylidene)methyl]amino]ethyl]amino]methylene]-3-oxo-, ethyl ester (9CI) (CA INDEX NAME)



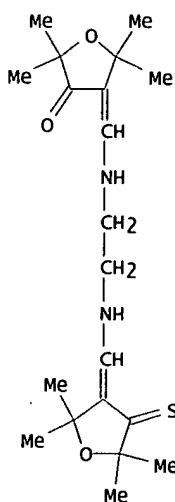
RN 142996-73-4 HCAPLUS  
 CN 3(2H)-Furanthione, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



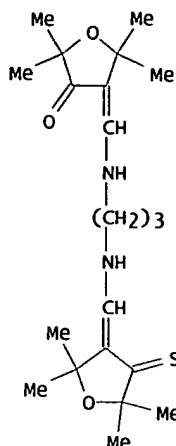
RN 142996-74-5 HCAPLUS  
 CN 3(2H)-Furanthione, 4,4'-[1,3-propanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



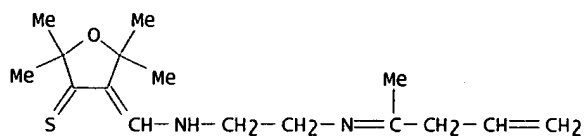
RN	142996-76-7	HCAPLUS
CN	3(2H)-Furanone, 4-[[[2-[[[(dihydro-2,2,5,5-tetramethyl-4-thioxo-3(2H)-furan-2-ylidene)methyl]amino]ethyl]amino]methylene]dihydro-2,2,5,5-tetramethyl-9CI] (CA INDEX NAME)	



RN	142996-79-0	HCAPLUS
CN	3(2H)-Furanone, 4-[[[3-[[[dihydro-2,2,5,5-tetramethyl-4-thioxo-3(2H)-furan-2-ylidene)methyl]amino]propyl]amino]methylene]dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)	

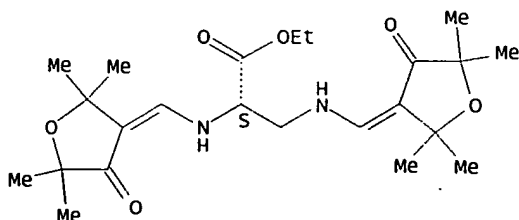


RN 142996-80-3 HCAPLUS  
 CN 3(2H)-Furanthione, dihydro-2,2,5,5-tetramethyl-4-[[[2-[(1-methyl-3-butenylidene)amino]ethyl]amino]methylene]- (9CI) (CA INDEX NAME)

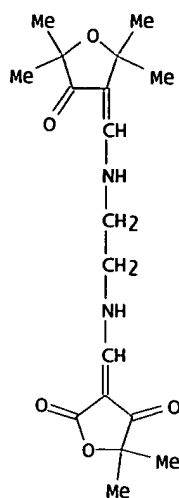


RN 142996-82-5 HCAPLUS  
 CN L-Alanine, N-[(dihydro-2,2,5,5-tetramethyl-4-oxo-3(2H)-furan-1-ylidene)methyl]-3-[[[(dihydro-2,2,5,5-tetramethyl-4-oxo-3(2H)-furan-1-ylidene)methyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

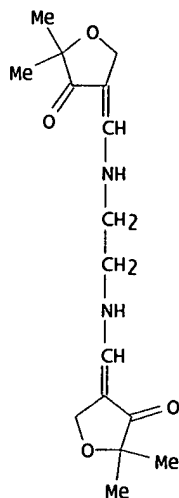
Absolute stereochemistry.  
 Double bond geometry unknown.



RN 142996-83-6 HCAPLUS  
 CN 2,4(3H,5H)-Furandione, 3-[[[2-[[[(dihydro-2,2,5,5-tetramethyl-4-oxo-3(2H)-furan-1-ylidene)methyl]amino]ethyl]amino]methylene]-5,5-dimethyl- (9CI) (CA INDEX NAME)

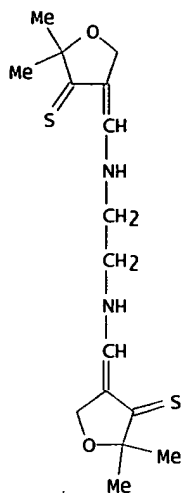


RN 143785-24-4 HCAPLUS  
 CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2-dimethyl- (9CI) (CA INDEX NAME)]

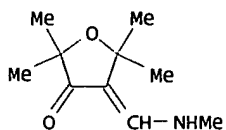


RN 143785-25-5 HCAPLUS  
 CN 3(2H)-Furanthione, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2-dimethyl- (9CI) (CA INDEX NAME)]

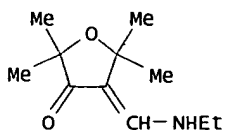




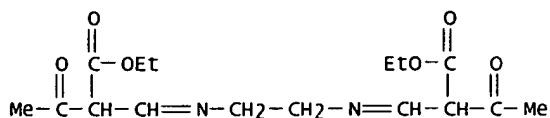
IT 83186-31-6P 142996-77-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and sulfurization of)  
 RN 83186-31-6 HCAPLUS  
 CN 3(2H)-Furanone, dihydro-2,2,5,5-tetramethyl-4-[(methylamino)methylene]-  
 (9CI) (CA INDEX NAME)



RN 142996-77-8 HCAPLUS  
 CN 3(2H)-Furanone, 4-[(ethylamino)methylene]dihydro-2,2,5,5-tetramethyl-  
 (9CI) (CA INDEX NAME)



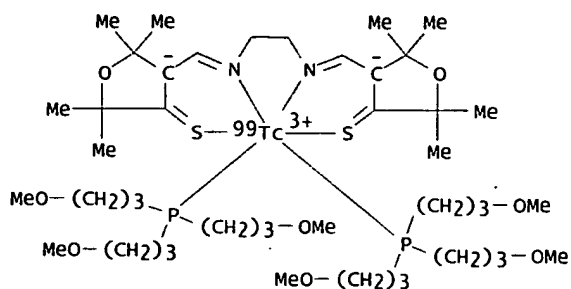
IT 15607-17-7P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 15607-17-7 HCAPLUS  
 CN Butanoic acid, 2,2'-[1,2-ethanediylbis(nitrilomethylidyne)]bis[3-oxo-,  
 diethyl ester (9CI) (CA INDEX NAME)



IT 143049-63-2P 143049-64-3P 143049-65-4P  
 143049-66-5P 143049-67-6P 143120-23-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of and heart scintigraphy with metastable)  
 RN 143049-63-2 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-

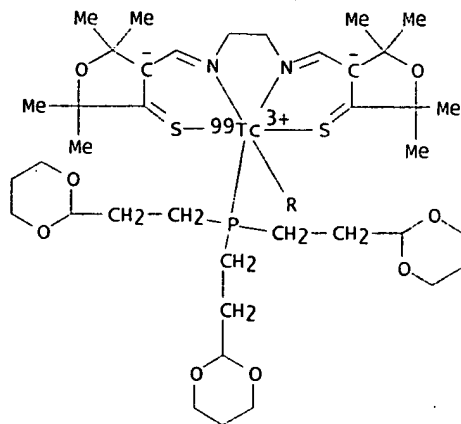
SEARCHED BY SUSAN HANLEY 305-4053

.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanthionato-.kappa.S3]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-33)-(9CI) (CA INDEX NAME)

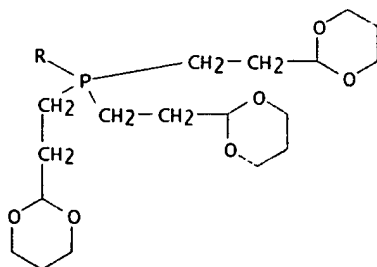


RN 143049-64-3 HCAPLUS  
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanthionato-.kappa.S3]](2-)]bis[tris[2-(1,3-dioxan-2-yl)ethyl]phosphine-P]-, (OC-6-33)-(9CI) (CA INDEX NAME)

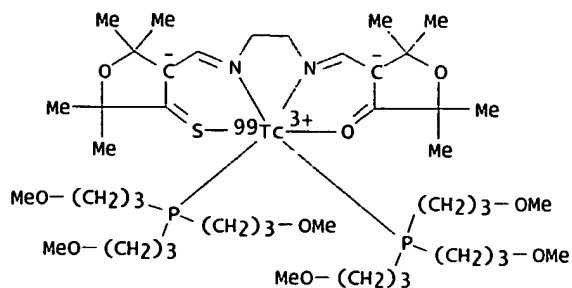
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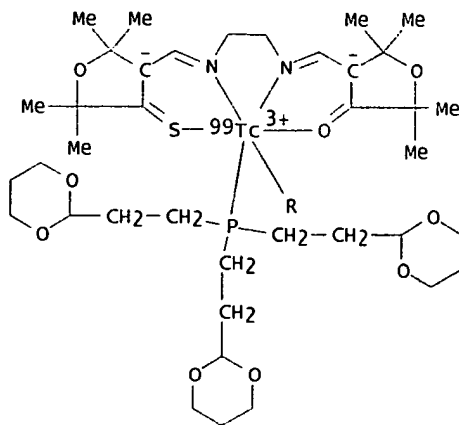
RN 143049-65-4 HCAPLUS  
CN Technetium(1+)-99Tc, [dihydro-2,2,5,5-tetramethyl-4-[[[2-[[[tetrahydro-2,2,5,5-tetramethyl-4-(thioxo-.kappa.S)-3-furanyl]methylene]amino-.kappa.N]ethyl]imino-.kappa.N)methyl]-3(2H)-furanonato(2-)-.kappa.O3]]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-52)-(9CI) (CA INDEX NAME)



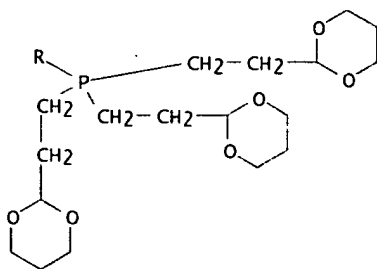
RN 143049-66-5 HCAPLUS

CN Technetium(1+)-99Tc, [dihydro-2,2,5,5-tetramethyl-4-[[[2-[[[(tetrahydro-2,2,5,5-tetramethyl-4-thioxo-3-furanyl)methylene]amino]ethyl]imino]methyl]-3(2H)-furanonato(2-)-N4,N4',O3,S4]bis[tris[2-(1,3-dioxan-2-yl)ethyl]phosphine-P]-, (OC-6-33)- (9CI) (CA INDEX NAME)

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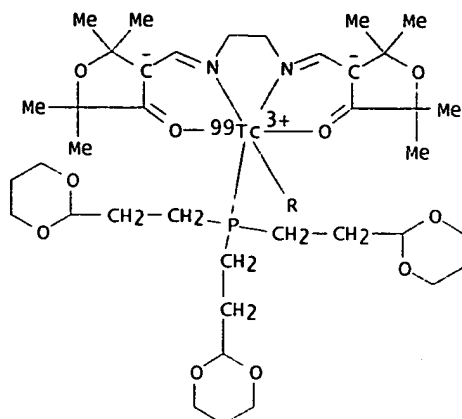
PAGE 2-A



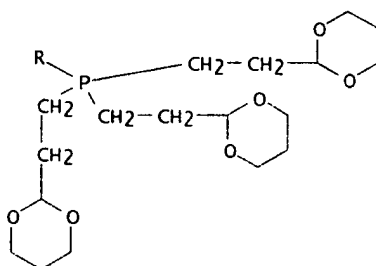
RN 143049-67-6 HCAPLUS

CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis(nitrilomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato]](2-)-N4,N4',O3,O3']bis[tris[2-(1,3-dioxan-2-yl)ethyl]phosphine-P]-, (OC-6-33)- (9CI) (CA INDEX NAME)

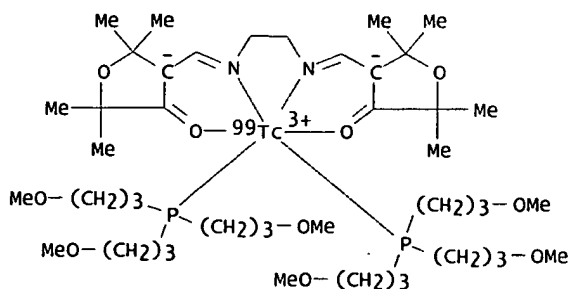
PAGE 1-A



PAGE 2-A



RN 143120-23-4 HCAPLUS  
 CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanedithiolate]bis(nitrilomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato]](2-)-N4,N4',O3,O3']bis[tris(3-methoxypropyl)phosphine-P]-, (OC-6-33)- (9CI) (CA INDEX NAME)



IT 14133-76-7DP, Technetium-99, complexes with dihydrofuranone derivs. and phosphines  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of metastable, for heart scintigraphy)  
 RN 14133-76-7 HCAPLUS  
 CN Technetium, isotope of mass 99 (8CI, 9CI) (CA INDEX NAME)

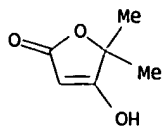
99Tc

IT 22621-30-3, 5,5-Dimethyltetronic acid  
 RL: RCT (Reactant)

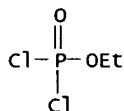
SEARCHED BY SUSAN HANLEY 305-4053

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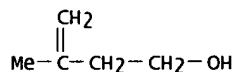
(reaction of, with DMF dimethylacetal)  
 RN 22621-30-3 HCAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-5,5-dimethyl- (8CI, 9CI) (CA INDEX NAME)



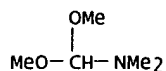
IT 1498-51-7  
 RL: RCT (Reactant)  
 (reaction of, with chloromethoxypropane)  
 RN 1498-51-7 HCAPLUS  
 CN Phosphorodichloridic acid, ethyl ester (8CI, 9CI) (CA INDEX NAME)



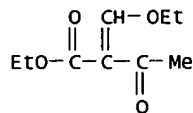
IT 763-32-6  
 RL: RCT (Reactant)  
 (reaction of, with dihydropyran)  
 RN 763-32-6 HCAPLUS  
 CN 3-Buten-1-ol, 3-methyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



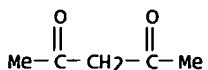
IT 4637-24-5, Dimethylformamide dimethylacetal  
 RL: RCT (Reactant)  
 (reaction of, with dimethyltetronic acid)  
 RN 4637-24-5 HCAPLUS  
 CN Methanamine, 1,1-dimethoxy-N,N-dimethyl- (9CI) (CA INDEX NAME)



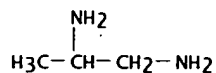
IT 3788-94-1, Ethyl 2-ethoxymethylene-3-oxobutanoate  
 RL: RCT (Reactant)  
 (reaction of, with ethylenediamine)  
 RN 3788-94-1 HCAPLUS  
 CN Butanoic acid, 2-(ethoxymethylene)-3-oxo-, ethyl ester (9CI) (CA INDEX NAME)



IT 123-54-6, Acetylacetone, reactions  
 RL: RCT (Reactant)  
 (reaction of, with ethylenediamine and methylaminomethylene-furanthione deriv.)  
 RN 123-54-6 HCAPLUS  
 CN 2,4-Pentanedione (8CI, 9CI) (CA INDEX NAME)

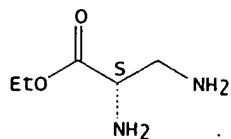


IT 78-90-0, Propylenediamine  
 RL: RCT (Reactant)  
 (reaction of, with hydroxymethylenedihydrofuranone deriv.)  
 RN 78-90-0 HCAPLUS  
 CN 1,2-Propanediamine (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 143119-70-4  
 RL: RCT (Reactant)  
 (reaction of, with hydroxymethylenefuranone deriv.)  
 RN 143119-70-4 HCAPLUS  
 CN L-Alanine, 3-amino-, ethyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● 2 HCl

IT 110-87-2  
 RL: RCT (Reactant)  
 (reaction of, with isoprenyl alc.)  
 RN 110-87-2 HCAPLUS  
 CN 2H-Pyran, 3,4-dihydro- (8CI, 9CI) (CA INDEX NAME)



=> d bib abs hitstr 126 10

L26 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1986:634863 HCAPLUS  
 DN 105:234863  
 TI Redox and spectral properties of some polypyridyl ruthenium, osmium and  
 rhenium oxo complexes  
 AU Pipes, David Wayne  
 CS Univ. North Carolina, Chapel Hill, NC, USA  
 SO (1985) 271 pp. Avail.: Univ. Microfilms Int., Order No. DA8605623  
 From: Diss. Abstr. Int. B 1986, 47(2), 624-5  
 DT Dissertation  
 LA English  
 AB Unavailable  
 IT 7440-04-2D, polypyridyl oxo complexes 7440-15-5D  
 , polypyridyl oxo complexes 7440-18-8D, polypyridyl  
 oxo complexes  
 RL: PRP (Properties)  
 (redox and spectral properties of)  
 RN 7440-04-2 HCAPLUS  
 CN Osmium (8CI, 9CI) (CA INDEX NAME)

OS

RN 7440-15-5 HCAPLUS  
 CN Rhenium (8CI, 9CI) (CA INDEX NAME)

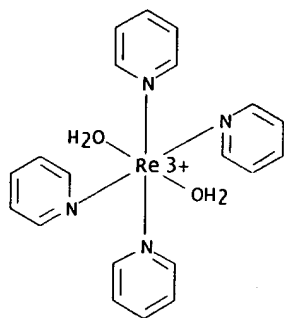
Re

RN 7440-18-8 HCAPLUS  
 CN Ruthenium (8CI, 9CI) (CA INDEX NAME)

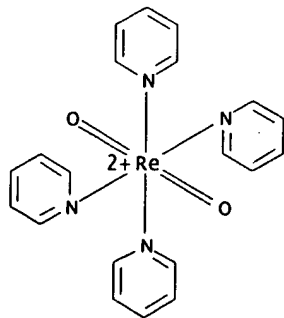
Ru

=&gt; d bib abs hitstr 126 11

L26 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1986:504532 HCAPLUS  
 DN 105:104532  
 TI Electrochemistry of trans-dioxo complexes of rhenium (V) in water  
 AU Pipes, David W.; Meyer, Thomas J.  
 CS Dep. Chem., Univ. North Carolina, Chapel Hill, NC, 27514, USA  
 SO Inorg. Chem. (1986), 25(18), 3256-62  
 CODEN: INOCAJ; ISSN: 0020-1669  
 DT Journal  
 LA English  
 AB Cyclic voltammetry of trans-[(py)4ReV(O)2]+ (py = pyridine) in aq. solns. at glassy-C electrodes shows that oxidn. states Re(VI)(d1) to Re(II)(d5) are accessible within the solvent limits. Similar behavior is obsd. for trans-[(CN)4ReV(O)2]3- and trans-[(en)2ReV(O)2]+. Redn. to Re(II) at 0.1 toreq. pH .1 toreq. 14 leads to H; kobsd (room temp., .mu. = 0.1 M) = 2.4 (+-.1.5) .times. 10-3 s-1 at pH 1.2. At pH 6.8 or 13.0, the addn. of NO2- or SO32- suppresses H2O redn. at the expense of electrocatalytic redn. of NO2- to NH3 and N2O and of SO32- to H2S or HS-. Comparisons between the Re-pyridyl-based couples and the structurally and electronically related trans-[(bpy)2OsVI(O)2]+ (bpy = 2,2'-bipyridine) couples suggest that the pattern of couples that appear and their pH dependences are detd. largely by the d-electronic configurations of the components. Differences in the magnitudes of redox potentials between electronically equiv. Re and Os couples were detd. by the differences in oxidn. state between the 2 types of couples.  
 IT 103191-77-1  
 RL: PRP (Properties)  
 (acid/base properties of)  
 RN 103191-77-1 HCAPLUS  
 CN Rhenium(3+), diaquatetrakis(pyridine)-, (OC-6-12)- (9CI) (CA INDEX NAME)



IT 99269-02-0  
 RL: PRP (Properties)  
 (elec. potential of redox couple contg.)  
 RN 99269-02-0 HCAPLUS  
 CN Rhenium(2+), dioxotetrakis(pyridine)-, (OC-6-12)- (9CI) (CA INDEX NAME)





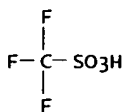
IT 1493-13-6

RL: PRP (Properties)

(elec. redn. potentials of rhenium complexes and visible spectrum of rhenium complexes in aq. solns. contg.)

RN 1493-13-6 HCAPLUS

CN Methanesulfonic acid, trifluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT 99268-99-2 99269-00-8 99269-01-9

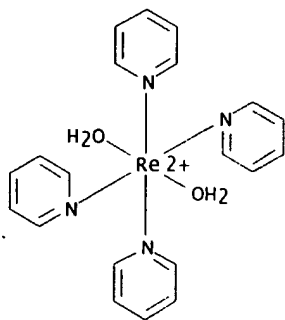
103191-75-9 103191-76-0

RL: PRP (Properties)

(electrochem. formation in aq. soln. and visible spectrum of)

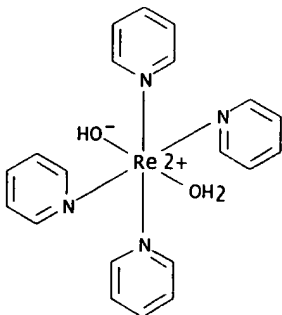
RN 99268-99-2 HCAPLUS

CN Rhenium(2+), diaquatetrakis(pyridine)-, (OC-6-12)- (9CI) (CA INDEX NAME)



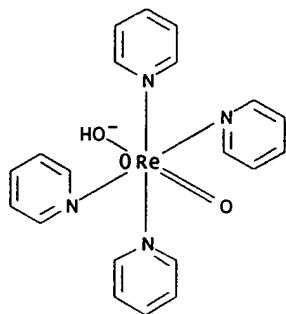
RN 99269-00-8 HCAPLUS

CN Rhenium(1+), aquahydroxytetrakis(pyridine)-, (OC-6-23)- (9CI) (CA INDEX NAME)

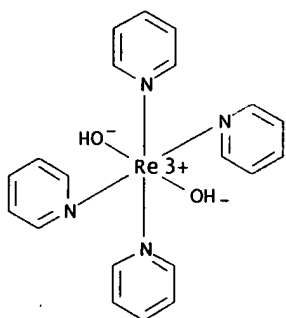


RN 99269-01-9 HCAPLUS

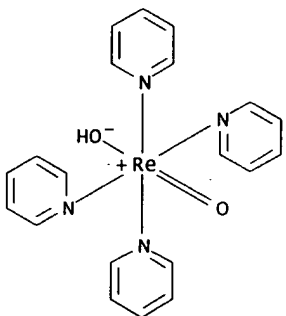
CN Rhenate(1-), hydroxyoxotetrakis(pyridine)-, (OC-6-23)- (9CI) (CA INDEX NAME)



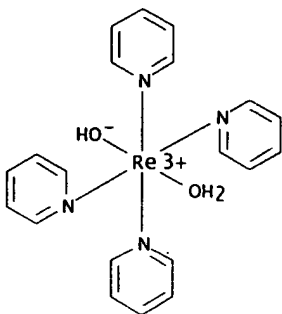
RN 103191-75-9 HCAPLUS  
CN Rhenium(1+), dihydroxytetrakis(pyridine)- (9CI) (CA INDEX NAME)



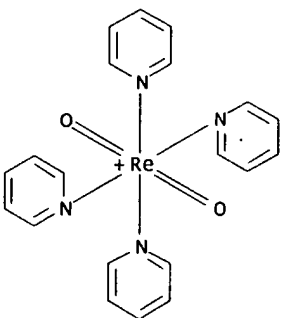
RN 103191-76-0 HCAPLUS  
CN Rhenium, hydroxyoxotetrakis(pyridine)- (9CI) (CA INDEX NAME)



IT 103191-74-8  
RL: PRP (Properties)  
(electrochem. formation in aq. solns. and acid/base properties and spectrum of)  
RN 103191-74-8 HCAPLUS  
CN Rhenium(2+), aquahydroxytetrakis(pyridine)- (9CI) (CA INDEX NAME)



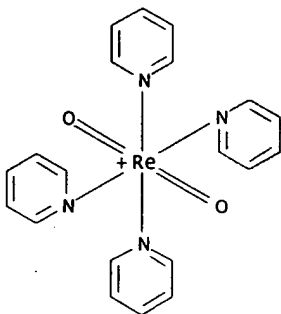
IT 21710-28-1  
 RL: PRP (Properties)  
 (electrochem. redn. in aq. soln. and visible spectrum of)  
 RN 21710-28-1 HCAPLUS  
 CN Rhenium(1+), dioxotetrakis(pyridine)-, (OC-6-12)- (9CI) (CA INDEX NAME)



IT 1333-74-0P, preparation  
 RL: FORM (Formation, nonpreparative); PREP (Preparation)  
 (formation of, in electrocatalytic redn. of water by rhenium  
 -pyridine complex)  
 RN 1333-74-0 HCAPLUS  
 CN Hydrogen (8CI, 9CI) (CA INDEX NAME)

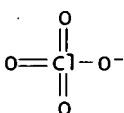
H-H

IT 83311-31-3P  
 RL: RCT (Reactant); PREP (Preparation)  
 (prepn. and electrochem. redn. of)  
 RN 83311-31-3 HCAPLUS  
 CN Rhenium(1+), dioxotetrakis(pyridine)-, (OC-6-12)-, perchlorate (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 21710-28-1  
 CMF C20 H20 N4 O2 Re  
 CCI CCS  
 CDES 7:OC-6-12



CM 2

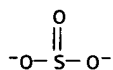
CRN 14797-73-0  
CMF Cl O4



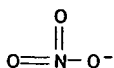
IT 7732-18-5, reactions  
RL: RCT (Reactant)  
(redn. of, electrochem., rhenium pyridine complex  
catalyst in)  
RN 7732-18-5 HCAPLUS  
CN Water (8CI, 9CI) (CA INDEX NAME)

H<sub>2</sub>O

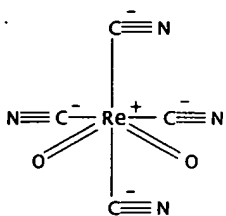
IT 14265-45-3 14797-55-8, reactions  
RL: RCT (Reactant)  
(redn. of, electrochem., rhenium-pyridine complex  
catalyst in)  
RN 14265-45-3 HCAPLUS  
CN Sulfite (8CI, 9CI) (CA INDEX NAME)



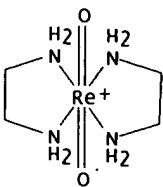
RN 14797-55-8 HCAPLUS  
CN Nitrate (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT 20756-46-1 21602-78-8  
RL: RCT (Reactant)  
(redox reactions of, electrochem.)  
RN 20756-46-1 HCAPLUS  
CN Rhenate(3-), tetrakis(cyano-.kappa.C)dioxo-, (OC-6-12)- (9CI) (CA INDEX NAME)

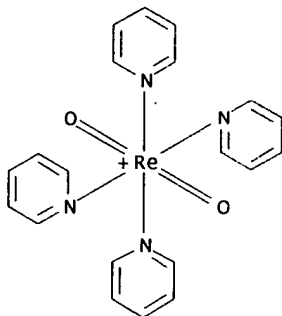


RN 21602-78-8 HCAPLUS  
 CN Rhenium(1+), bis(1,2-ethanediamine-.kappa.N,.kappa.N')dioxo-, (OC-6-12)-  
 (9CI) (CA INDEX NAME)

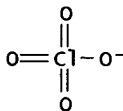


=&gt; d bib abs hitstr 126 12

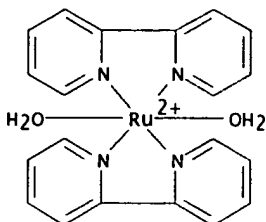
L26 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1985:623084 HCAPLUS  
 DN 103:223084  
 TI Aqueous electrochemistry of trans-(py)<sub>4</sub>ReV(O)<sub>2</sub><sup>+</sup>. Electrocatalytic reductions based on rhenium(II)  
 AU Pipes, David W.; Meyer, Thomas J.  
 CS Dep. Chem., Univ. North Carolina, Chapel Hill, NC, 27514, USA  
 SO J. Am. Chem. Soc. (1985), 107(24), 7201-2  
 CODEN: JACSAT; ISSN: 0002-7863  
 DT Journal  
 LA English  
 AB The aq. electrochem. of trans-(py)<sub>4</sub>ReV(O)<sub>2</sub><sup>+</sup> reveals the existence of pH dependent Re(V/III) and Re(III/II) couples and a pH independent Re(VI/V) couple over the pH range 0.5 to 13. Following redn. past the Re(III/II) couple the Re system becomes an electrocatalyst for the redn. of H<sub>2</sub>O to H and for the redn. of NO<sub>2</sub><sup>-</sup> to NH<sub>3</sub>.  
 IT 83311-31-3  
 RL: PEP (Physical, engineering or chemical process); PROC (Process) (cyclic voltammetry of, on glassy carbon in triflic acid)  
 RN 83311-31-3 HCAPLUS  
 CN Rhenium(1+), dioxotetrakis(pyridine)-, (OC-6-12)-, perchlorate (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 21710-28-1  
 CMF C20 H20 N4 O2 Re  
 CCI CCS  
 CDES 7:OC-6-12



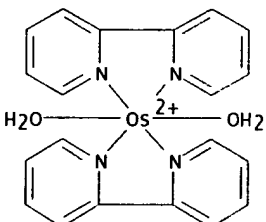
CM 2  
 CRN 14797-73-0  
 CMF Cl O4



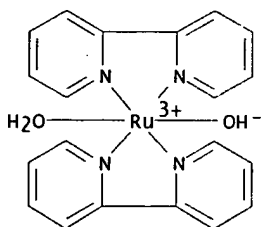
IT 72174-09-5 84988-25-0  
 RL: PRP (Properties) (elec. potential of redox system contg., electron configuration in relation to)  
 RN 72174-09-5 HCAPLUS  
 CN Ruthenium(2+), diaquabis(2,2'-bipyridine-.kappa.N1,.kappa.N1')-, (OC-6-22)- (9CI) (CA INDEX NAME)



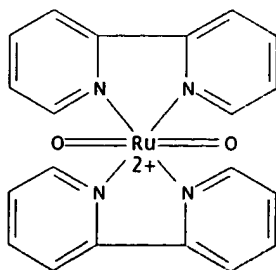
RN 84988-25-0 HCAPLUS  
CN Osmium(2+), diaquabis(2,2'-bipyridine-N,N')-, (OC-6-22)- (9CI) (CA INDEX NAME)



IT 72155-92-1 84988-24-9 84988-27-2  
84988-28-3 84988-29-4 85114-19-8  
99269-02-0 99269-03-1 99280-69-0  
RL: PRP (Properties)  
(elec. redn. potential of, electron configuration in relation to)  
RN 72155-92-1 HCAPLUS  
CN Ruthenium(2+), aquabis(2,2'-bipyridine-N,N')hydroxy-, (OC-6-23)- (9CI)  
(CA INDEX NAME)



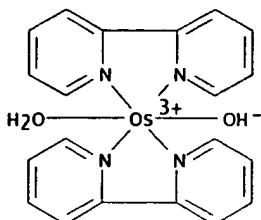
RN 84988-24-9 HCAPLUS  
CN Ruthenium(2+), bis(2,2'-bipyridine-N,N')dioxo-, (OC-6-22)- (9CI) (CA INDEX NAME)



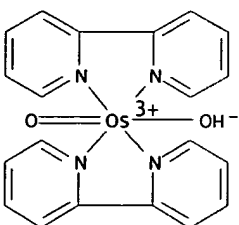
RN 84988-27-2 HCAPLUS  
CN Osmium(2+), aquabis(2,2'-bipyridine-N,N')hydroxy-, (OC-6-33)- (9CI) (CA

SEARCHED BY SUSAN HANLEY 305-4053

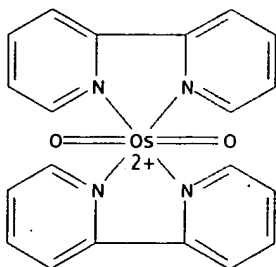
INDEX NAME)



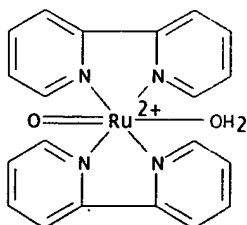
RN 84988-28-3 HCAPLUS  
CN Osmium(2+), bis(2,2'-bipyridine-N,N')hydroxyoxo-, (OC-6-33)- (9CI) (CA INDEX NAME)



RN 84988-29-4 HCAPLUS  
CN Osmium(2+), bis(2,2'-bipyridine-N,N')dioxo-, (OC-6-22)- (9CI) (CA INDEX NAME)

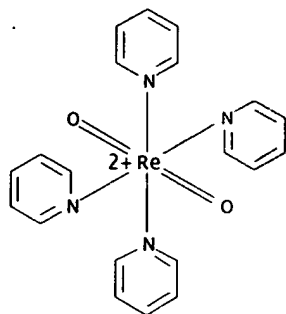


RN 85114-19-8 HCAPLUS  
CN Ruthenium(2+), aquabis(2,2'-bipyridine-N,N')oxo-, (OC-6-23)- (9CI) (CA INDEX NAME)

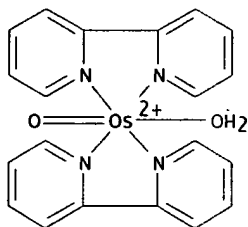


RN 99269-02-0 HCAPLUS  
CN Rhenium(2+), dioxotetrakis(pyridine)-, (OC-6-12)- (9CI) (CA INDEX NAME)

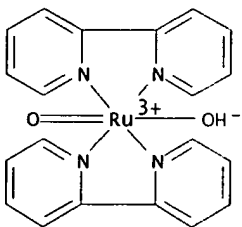




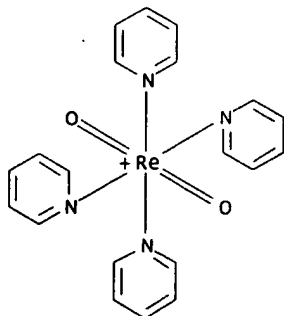
RN 99269-03-1 HCAPLUS  
CN Osmium(2+), aquabis(2,2'-bipyridine-N,N')oxo-, (OC-6-33)- (9CI) (CA INDEX NAME)



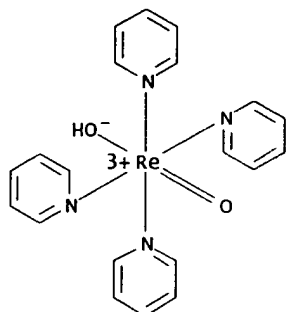
RN 99280-69-0 HCAPLUS  
CN Ruthenium(2+), bis(2,2'-bipyridine-N,N')hydroxyoxo-, (OC-6-33)- (9CI) (CA INDEX NAME)



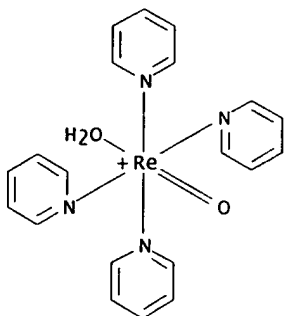
IT 21710-28-1 47515-09-3 99268-98-1  
RL: PRP (Properties)  
(elec. redn. potential of, pH in relation to)  
RN 21710-28-1 HCAPLUS  
CN Rhenium(1+), dioxotetrakis(pyridine)-, (OC-6-12)- (9CI) (CA INDEX NAME)



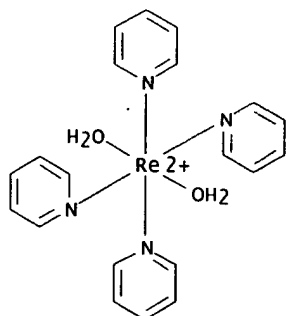
RN 47515-09-3 HCAPLUS  
CN Rhenium(2+), hydroxyoxotetrakis(pyridine)-, (OC-6-23)- (9CI) (CA INDEX NAME)



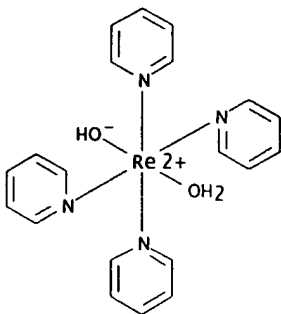
RN 99268-98-1 HCAPLUS  
CN Rhenium(1+), aquaoxotetrakis(pyridine)-, (OC-6-23)- (9CI) (CA INDEX NAME)



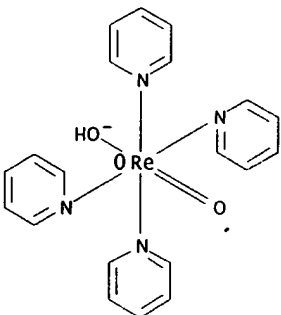
IT 99268-99-2 99269-00-8 99269-01-9  
RL: PRP (Properties)  
(elec. redox potential of system contg., pH in relation to)  
RN 99268-99-2 HCAPLUS  
CN Rhenium(2+), diaquatetrakis(pyridine)-, (OC-6-12)- (9CI) (CA INDEX NAME)



RN 99269-00-8 HCAPLUS  
CN Rhenium(1+), aquahydroxytetrakis(pyridine)-, (OC-6-23)- (9CI) (CA INDEX NAME)



RN 99269-01-9 HCAPLUS  
CN Rhenate(1-), hydroxyoxotetrakis(pyridine)-, (OC-6-23)- (9CI) (CA INDEX NAME)



IT 1333-74-0P, preparation  
RL: PREP (Preparation)  
(evolution of, in electrochem. redn. of water, rhenium bipyridine complex electrocatalyst for)  
RN 1333-74-0 HCAPLUS  
CN Hydrogen (8CI, 9CI) (CA INDEX NAME)

H-H

IT 7664-41-7P, preparation  
RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, in electrochem. redn. of nitrite, rhenium bipyridine electrocatalyst for)  
RN 7664-41-7 HCAPLUS  
CN Ammonia (8CI, 9CI) (CA INDEX NAME)

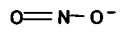
NH<sub>3</sub>

IT 7732-18-5, reactions 14797-65-0, reactions  
RL: RCT (Reactant)  
(redn. of, rhenium(II) pyridine complex electrocatalyst for)  
RN 7732-18-5 HCAPLUS  
CN Water (8CI, 9CI) (CA INDEX NAME)

H<sub>2</sub>O

RN 14797-65-0 HCAPLUS  
CN Nitrite (8CI, 9CI) (CA INDEX NAME)

CEPERLEY 09/576,960



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L28 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2001 ACS  
 AN 2000:241925 HCAPLUS  
 DN 132:300074  
 TI Experimental and theoretical studies of pit initiation at single  
 Mns inclusions in stainless steels  
 AU Webb, E. G.; Suter, T.; Topin, F.; Alkire, R. C.  
 CS Department of Chemical Engineering and Frederick Seitz Materials Research  
 Laboratory, University of Illinois, Urbana, IL, USA  
 SO Proc. - Electrochem. Soc. (1999), 99-27(Passivity and Localized  
 Corrosion), 425-434  
 CODEN: PESODO; ISSN: 0161-6374  
 PB Electrochemical Society  
 DT Journal  
 LA English  
 AB Pit initiation at single large Mns inclusion of 304 stainless  
 steel was studied exptl. and numerically. The use of microcapillaries as  
 electrochem. cells allowed the testing of small areas with only one  
 inclusion. In 1M NaCl measurements were performed parallel and  
 perpendicular to the rolling direction of a thin 304 steel plate. In  
 parallel direction the inclusions were shallow and in perpendicular  
 direction deep. Multiple current transients were obsd. during dissoln. of  
 a shallow inclusion but the metastable events did not initiate stable  
 pitting. Polarization curves measured on deep Mns inclusions  
 showed active pitting. The dissoln. of shallow Mns inclusion  
 did not form a deep microcrevice between the Mns and stainless  
 steel matrix. The geometry did not allow high concns. of aggressive  
 species. However, the dissoln. of deep Mns inclusions formed  
 deep microcrevices at the interface Mns inclusion/bulk leading  
 to stable pitting. The chem. inside a microcrevice was simulated using  
 both a 1-dimensional and a 2-dimensional finite difference model.  
 Simulations of deep Mns inclusions indicated that in a 3 .mu.m  
 deep microcrevice the combination of pH 2 and a chloride concn. of 5M lead  
 to stable pitting.  
 IT 18820-29-6, Manganese sulfide (Mns)  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
 PROC (Process)  
 (exptl. and theor. studies of pit initiation at single Mns  
 inclusions in stainless steels: electrolytic polarization of stainless  
 steels with Mns . inclusions in NaCl soln.)  
 RN 18820-29-6 HCAPLUS  
 CN Manganese sulfide (Mns) (8CI, 9CI) (CA INDEX NAME)

Mn==S

IT 11109-50-5, AISI 304  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical  
 process); PRP (Properties); PROC (Process); USES (Uses)  
 (exptl. and theor. studies of pit initiation at single Mns  
 inclusions in stainless steels: electrolytic polarization of stainless  
 steels with Mns inclusions in NaCl soln.)  
 RN 11109-50-5 HCAPLUS  
 CN Iron alloy, base, Fe 66-74,Cr 18.00-20.00,Ni 8.00-10.50,Mn 0-2.00,Si  
 0-1.00,C 0-0.08,P 0-0.045,S 0-0.030 (UNS S30400) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Fe	66 - 74	7439-89-6
Cr	18.00 - 20.00	7440-47-3
Ni	8.00 - 10.50	7440-02-0
Mn	0 - 2.00	7439-96-5
Si	0 - 1.00	7440-21-3
C	0 - 0.08	7440-44-0
P	0 - 0.045	7723-14-0
S	0 - 0.030	7704-34-9

IT 7647-14-5, Sodium chloride, uses  
 RL: NUU (Nonbiological use, unclassified); PEP (Physical, engineering or  
 chemical process); PRP (Properties); PROC (Process); USES (Uses)  
 (exptl. and theor. studies of pit initiation at single Mns  
 inclusions in stainless steels: electrolytic polarization of stainless  
 steels with Mns inclusions in NaCl soln.)

SEARCHED BY SUSAN HANLEY 305-4053

CEPERLEY 09/576,960

RN 7647-14-5 HCAPLUS  
CN Sodium chloride (NaCl) (9CI) (CA INDEX NAME)

Cl-Na

RE.CNT 16

RE

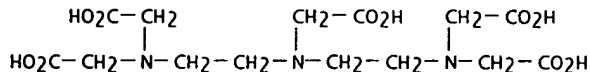
- (2) Castle, J; Corr Sci 1990, V30, P409 HCAPLUS
- (3) Eklund, G; J Electrochem Soc 1974, V121, P467 HCAPLUS
- (4) Eklund, G; Scandinavian Journal of Metallurgy 1972, V1, P331 HCAPLUS
- (5) Georgiadou, M; J Electrochem Soc 1994, V141, P679 HCAPLUS
- (6) Ke, R; J Electrochem Soc 1992, V139, P1573 HCAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs hitstr 128 2

L28 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1997:127463 HCAPLUS  
 DN 126:135593  
 TI Radiolabeled peptide compositions for site-specific targeting  
 IN Srinivasan, Ananthachari; Dyszlewski, Mary Marmion; Bugaj,  
 Joseph E.  
 PA Mallinckrodt Medical, Inc., USA  
 SO PCT Int. Appl., 18 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9640291	A1	19961219	WO 1996-US9384	19960606
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5830431	A	19981103	US 1995-480373	19950607
	CA 2224153	AA	19961219	CA 1996-2224153	19960606
	EP 831938	A1	19980401	EP 1996-922403	19960606
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
	JP 11507342	T2	19990629	JP 1996-501714	19960606
	US 5804157	A	19980908	US 1997-989434	19971212
PRAI	US 1995-480373		19950607		
	WO 1996-US9384		19960606		
AB	This invention relates to radiolabeled peptide compns. for radiopharmaceutical use and, more specifically, to radiolabeled peptides for diagnostic or therapeutic use having an unmodified carboxy terminal amino acid. The radiopharmaceutical compn. may be used for targeting a selected biol. site. The radiolabeled peptide is characterized by having its carboxy terminal amino acid in its carboxylic acid form and the peptide is coupled to a diagnostic or therapeutic radionuclide by a chelating agent. The radiopharmaceutical compn. preferably comprises a radiolabeled peptide selected from the group consisting of somatostatin, an analog of somatostatin, a deriv. of somatostatin and peptides capable of binding to the somatostatin receptor, where the peptide is coupled to a diagnostic or therapeutic radionuclide by a chelating agent has its carboxy terminal amino acid in its carboxylic acid form.				
IT	51110-01-1, Somatostatin 51110-01-10, Somatostatin, derivs. RL: BPR (Biological process); PEP (Physical, engineering or chemical process); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (radiolabeled peptide compns. for site-specific targeting)				
RN	51110-01-1 HCAPLUS				
CN	Somatostatin (9CI) (CA INDEX NAME)				
***	STRUCTURE DIAGRAM IS NOT AVAILABLE ***				
RN	51110-01-1 HCAPLUS				
CN	Somatostatin (9CI) (CA INDEX NAME)				
***	STRUCTURE DIAGRAM IS NOT AVAILABLE ***				
IT	67-43-6 RL: BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (radiolabeled peptide compns. for site-specific targeting)				
RN	67-43-6 HCAPLUS				
CN	Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]- (7CI, 8CI, 9CI) (CA INDEX NAME)				



IT 10043-49-9, Gold 198, biological studies 10098-91-6,  
 Yttrium 90, biological studies 13967-64-1, Dysprosium 165,  
 biological studies 13981-49-2, Tellurium 127, biological studies  
 14133-76-7, Technetium 99, biological studies  
 14191-64-1, Praseodymium 142, biological studies  
 14378-26-8, Rhenium 188, biological studies  
 14596-37-3, Phosphorus 32, biological studies 14683-06-8

SEARCHED BY SUSAN HANLEY 305-4053

, Tin 121, biological studies 14981-64-7, Palladium 109, biological studies 14981-79-4, Praseodymium 143, biological studies 14998-63-1, Rhenium 186, biological studies 15750-15-9, Indium 111, biological studies 15757-86-5, Copper 67, biological studies 15766-00-4, Samarium 153, biological studies 15840-13-8, Erbium 169, biological studies  
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (radiolabeled peptide compns: for site-specific targeting)

RN 10043-49-9 HCAPLUS  
 CN Gold, isotope of mass 198 (8CI, 9CI) (CA INDEX NAME)

198Au

RN 10098-91-6 HCAPLUS  
 CN Yttrium, isotope of mass 90 (8CI, 9CI) (CA INDEX NAME)

90Y

RN 13967-64-1 HCAPLUS  
 CN Dysprosium, isotope of mass 165 (8CI, 9CI) (CA INDEX NAME)

165Dy

RN 13981-49-2 HCAPLUS  
 CN Tellurium, isotope of mass 127 (8CI, 9CI) (CA INDEX NAME)

127Te

RN 14133-76-7 HCAPLUS  
 CN Technetium, isotope of mass 99 (8CI, 9CI) (CA INDEX NAME)

99Tc

RN 14191-64-1 HCAPLUS  
 CN Praseodymium, isotope of mass 142 (8CI, 9CI) (CA INDEX NAME)

142Pr

RN 14378-26-8 HCAPLUS  
 CN Rhenium, isotope of mass 188 (8CI, 9CI) (CA INDEX NAME)

188Re

RN 14596-37-3 HCAPLUS  
 CN Phosphorus, isotope of mass 32 (8CI, 9CI) (CA INDEX NAME)

32P

RN 14683-06-8 HCAPLUS  
 CN Tin, isotope of mass 121 (8CI, 9CI) (CA INDEX NAME)

121Sn

RN 14981-64-7 HCAPLUS  
 CN Palladium, isotope of mass 109 (8CI, 9CI) (CA INDEX NAME)



109pd

RN 14981-79-4 HCAPLUS  
CN Praseodymium, isotope of mass 143 (8CI, 9CI) (CA INDEX NAME)

143pr

RN 14998-63-1 HCAPLUS  
CN Rhenium, isotope of mass 186 (8CI, 9CI) (CA INDEX NAME)

186Re

RN 15750-15-9 HCAPLUS  
CN Indium, isotope of mass 111 (8CI, 9CI) (CA INDEX NAME)

111In

RN 15757-86-5 HCAPLUS  
CN Copper, isotope of mass 67 (8CI, 9CI) (CA INDEX NAME)

67Cu

RN 15766-00-4 HCAPLUS  
CN Samarium, isotope of mass 153 (8CI, 9CI) (CA INDEX NAME)

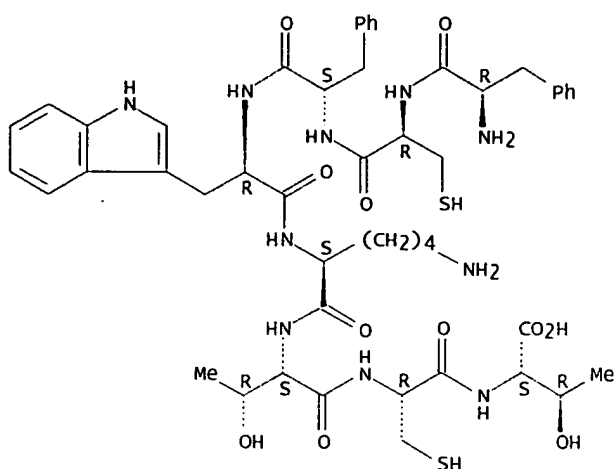
153Sm

RN 15840-13-8 HCAPLUS  
CN Erbium, isotope of mass 169 (8CI, 9CI) (CA INDEX NAME)

169Er

IT 150957-56-5P 186464-64-2P 186464-65-3P  
186464-66-4P 186464-68-6P 186464-69-7P  
RL: PNU (Preparation, unclassified); PRP (Properties); RCT (Reactant);  
PREP (Preparation)  
(radiolabeled peptide compns. for site-specific targeting)  
RN 150957-56-5 HCAPLUS  
CN L-Threonine, D-phenylalanyl-L-cysteinyl-L-phenylalanyl-D-tryptophyl-L-  
lysyl-L-threonyl-L-cysteinyl- (9CI) (CA INDEX NAME)

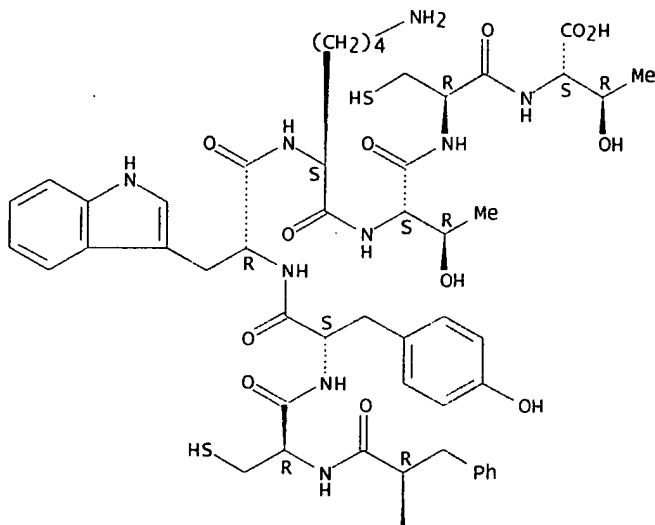
Absolute stereochemistry.



RN	186464-64-2	HCAPLUS
CN	L-Threonine, D-phenylalanyl-L-cysteiny-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteiny- (9CI) (CA INDEX NAME)	

Absolute stereochemistry.

PAGE 1-A



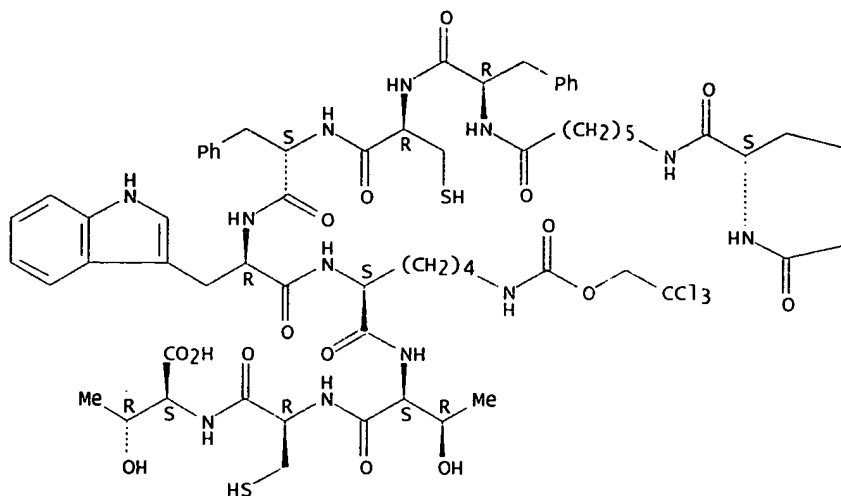
PAGE 2-A



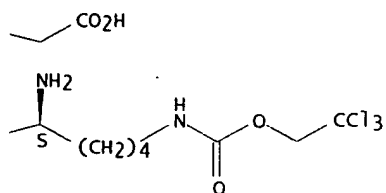
RN	186464-65-3	HCAPLUS
CN	L-Threonine, N6-[(2,2,2-trichloroethoxy)carbonyl]-L-lysyl-L-.alpha.-glutamyl-6-aminohexanoyl-D-phenylalanyl-L-cysteiny-L-phenylalanyl-D-tryptophyl-N6-[(2,2,2-trichloroethoxy)carbonyl]-L-lysyl-L-threonyl-L-cysteiny-L (9CI) (CA INDEX NAME)	

**Absolute stereochemistry.**

PAGE 1-A



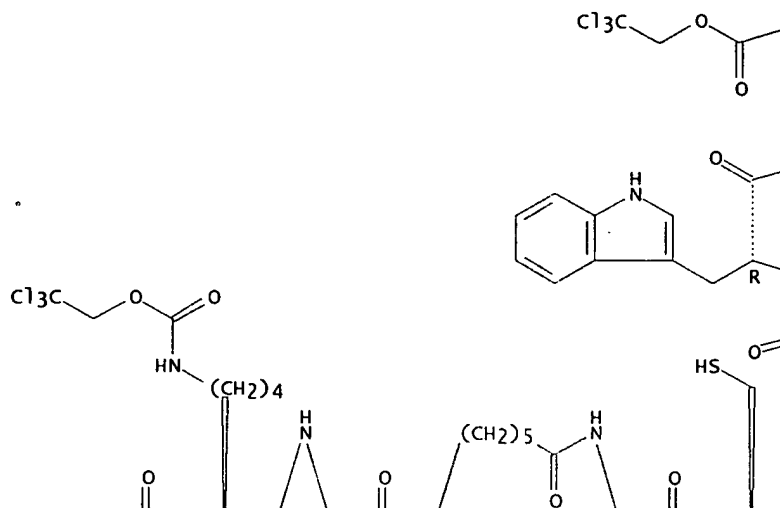
PAGE 1-B



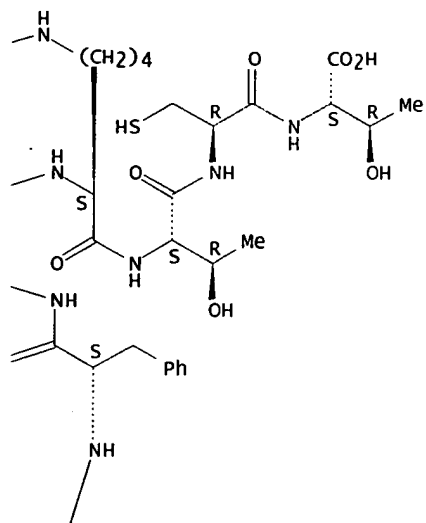
RN 186464-66-4 HCAPLUS  
 CN L-Threonine, N2-[[[(tetrahydro-2H-pyran-2-yl)thio]acetyl]-N6-[(2,2,2-trichloroethoxy)carbonyl]-L-lysyl-L-.alpha.-glutamyl-6-aminohexanoyl-D-phenylalanyl-L-cysteinyl-L-phenylalanyl-D-tryptophyl-N6-[(2,2,2-trichloroethoxy)carbonyl]-L-lysyl-L-threonyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

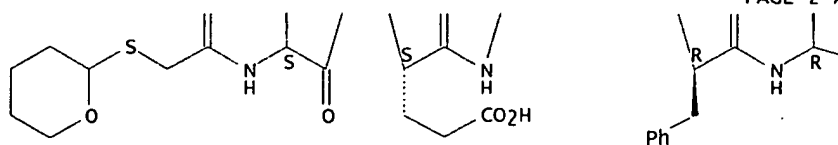
PAGE 1-A



PAGE 1-B



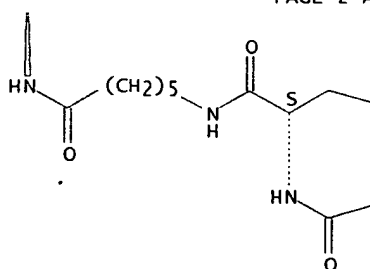
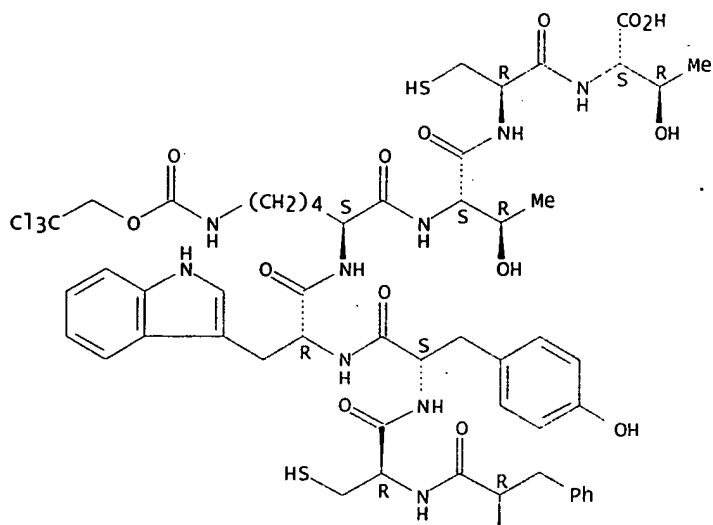
PAGE 2-A

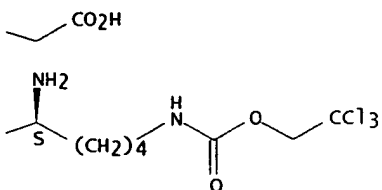




RN 186464-68-6 HCAPLUS  
 CN L-Threonine, N6-[(2,2,2-trichloroethoxy)carbonyl]-L-lysyl-L-.alpha.-  
 glutamyl-6-aminohexanoyl-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-  
 N6-[(2,2,2-trichloroethoxy)carbonyl]-L-lysyl-L-threonyl-L-cysteinyl- (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry.

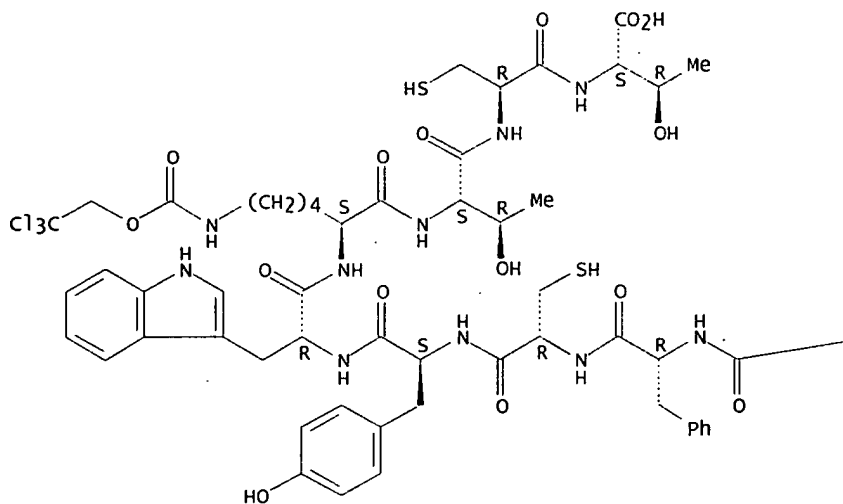


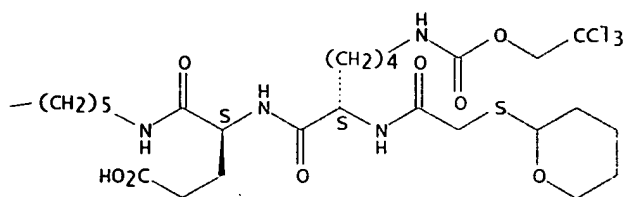


RN 186464-69-7 HCAPLUS  
 CN L-Threonine, N2-[[[(tetrahydro-2H-pyran-2-yl)thio]acetyl]-N6-[(2,2,2-trichloroethoxy)carbonyl]-L-lysyl-L-.alpha.-glutamyl-6-aminohexanoyl-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-N6-[(2,2,2-trichloroethoxy)carbonyl]-L-lysyl-L-threonyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A





IT 186464-67-5P 186464-70-0P

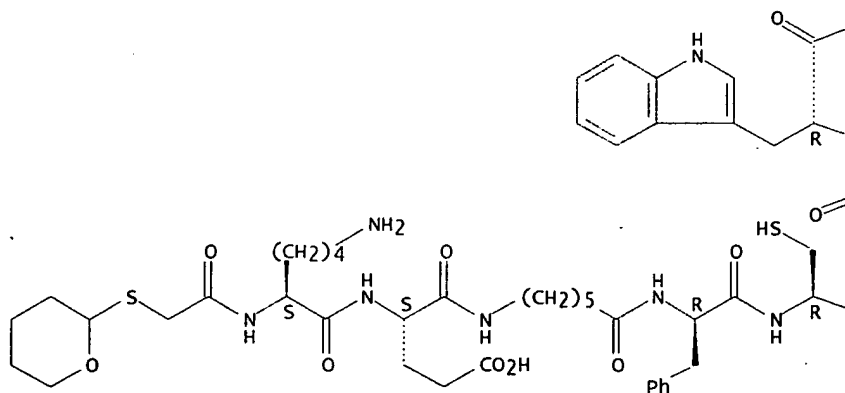
RL: PNU (Preparation, unclassified); PRP (Properties); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(radiolabeled peptide compns. for site-specific targeting)

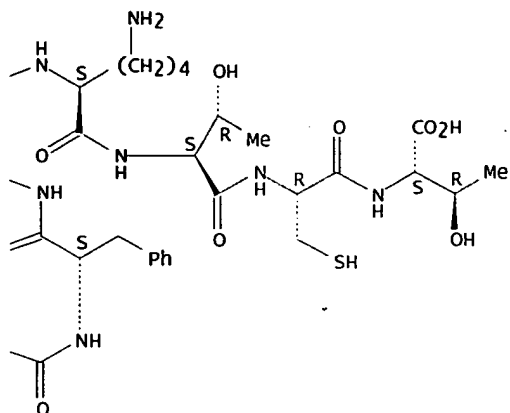
RN 186464-67-5 HCAPLUS

CN L-Threonine, N2-[[[(tetrahydro-2H-pyran-2-yl)thio]acetyl]-L-lysyl-L-.alpha.-glutamyl-6-aminohexanoyl-D-phenylalanyl-L-cysteinyl-L-phenylalanyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



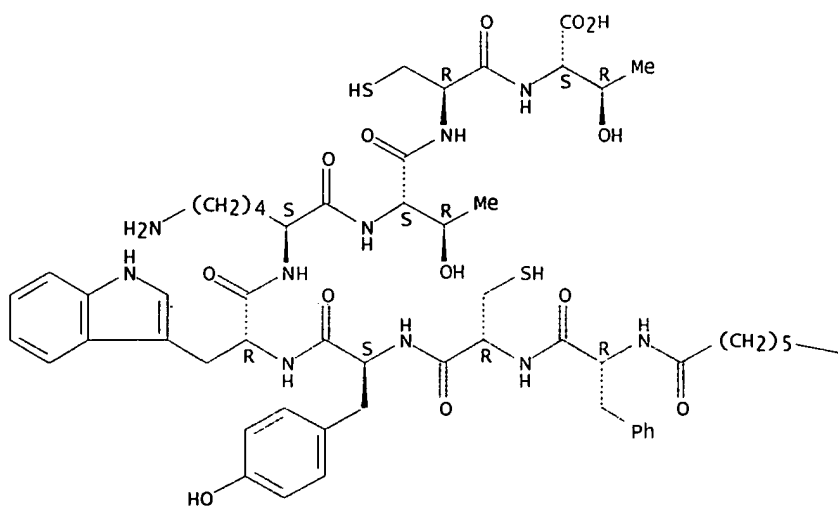
PAGE 1-B



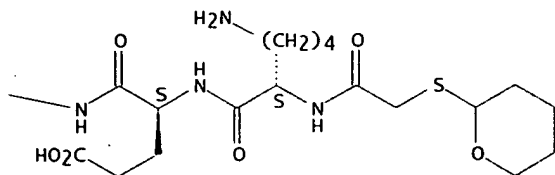
RN 186464-70-0 HCAPLUS  
 CN L-Threonine, N2-[[[(tetrahydro-2H-pyran-2-yl)thio]acetyl]-L-lysyl-L-.alpha.-glutamyl-6-aminohexanoyl-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

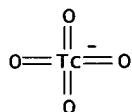
PAGE 1-A



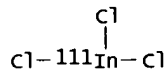




IT 14333-20-1 50800-85-6, Indium 111 chloride  
 71989-35-0 121557-45-7 186349-51-9  
 RL: RCT (Reactant)  
 (radiolabeled peptide compns. for site-specific targeting)  
 RN 14333-20-1 HCAPLUS  
 CN Technetate (Tc041-), (T-4)- (9CI) (CA INDEX NAME)

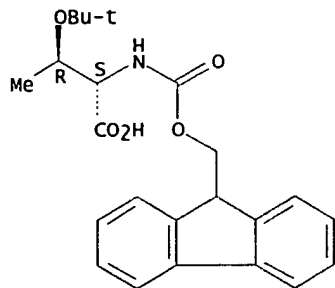


RN 50800-85-6 HCAPLUS  
 CN Indium chloride (111InCl3) (9CI) (CA INDEX NAME)

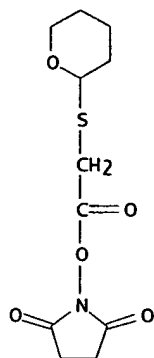


RN 71989-35-0 HCAPLUS  
 CN L-Threonine, O-(1,1-dimethylethyl)-N-[(9H-fluoren-9-ylmethoxy)carbonyl]-  
 (9CI) (CA INDEX NAME)

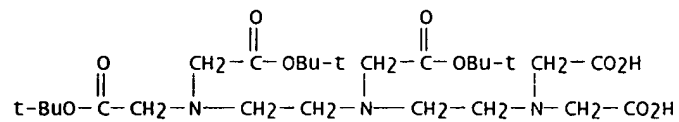
Absolute stereochemistry.



RN 121557-45-7 HCAPLUS  
 CN 2,5-Pyrrolidinedione, 1-[[[(tetrahydro-2H-pyran-2-yl)thio]acetyl]oxy]-  
 (9CI) (CA INDEX NAME)



RN 186349-51-9 HCAPLUS  
 CN 3-oxa-6,9,12-triazatetradecan-14-oic acid, 12-(carboxymethyl)-6,9-bis[2-(1,1-dimethylethoxy)-2-oxoethyl]-2,2-dimethyl-4-oxo- (9CI) (CA INDEX NAME)



=&gt; d bib abs hitstr 128 3

L28 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1993:588573 HCAPLUS  
 DN 119:188573  
 TI Cyclic oligosaccharides for stabilization of radiopharmaceuticals  
 IN Derosch, Mark A.; Deutsch, Edward A.; Dyszlewski, Mary Marmion;  
 Nosco, Dennis L.  
 PA Mallinckrodt Medical, Inc., USA  
 SO PCT Int. Appl., 21 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9315765	A1	19930819	WO 1993-US1196	19930209
	W: AU, BG, CA, FI, HU, JP, NO, PL, RO, RU				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5300280	A	19940405	US 1992-836644	19920214
	AU 9336624	A1	19930903	AU 1993-36624	19930209
	EP 625054	A1	19941123	EP 1993-905864	19930209
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, NL, PT, SE				
	HU 74566	A2	19970128	HU 1994-2349	19930209
	IL 104655	A1	19980615	IL 1993-104655	19930209
	ZA 9300949	A	19931207	ZA 1993-949	19930211
	NO 9402899	A	19940804	NO 1994-2899	19940804
	FI 9403724	A	19940812	FI 1994-3724	19940812

PRAI US 1992-836644 19920214  
 WO 1993-US1196 19930209

AB Cyclic oligosaccharides, e.g. cyclodextrins, are used for stabilization of radiopharmaceuticals. A kit contained a ligand capable of bonding to a radioisotope 20, tris(3-methoxypropyl)phosphine 1.5, Na<sub>2</sub>CO<sub>3</sub> 1.5, Na ascorbate 2.0, copper salt 0.24, and hydroxypropyl-.beta.-cyclodextrin 94.8%. The radiochem. purity after 2 wks at 50.degree. was 95.5 as compared to 8.30%.

IT 14133-76-7, Technetium-99, biological studies

RL: BIOL (Biological study)

(metastable, radiopharmaceuticals contg., stabilization of, with cyclic oligosaccharides)

RN 14133-76-7 HCAPLUS

CN Technetium, isotope of mass 99 (8CI, 9CI) (CA INDEX NAME)

99Tc

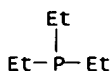
IT 554-70-1 594-09-2 7784-42-1, Arsine  
 7803-51-2, Phosphine 14378-26-8, Rhenium-188,  
 biological studies 14998-63-1, Rhenium-186, biological  
 studies 23936-60-9 83622-85-9 125585-84-4  
 127502-06-1 142996-85-8 142996-86-9  
 142996-87-0 142996-88-1 142996-90-5  
 142996-92-7 142996-93-8 150565-57-4

RL: BIOL (Biological study)

(radiopharmaceuticals contg., stabilization of, with cyclic oligosaccharides)

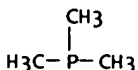
RN 554-70-1 HCAPLUS

CN Phosphine, triethyl- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 594-09-2 HCAPLUS

CN Phosphine, trimethyl- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 7784-42-1 HCAPLUS  
CN Arsine (8CI, 9CI) (CA INDEX NAME)

ASH<sub>3</sub>

RN 7803-51-2 HCAPLUS  
CN Phosphine (6CI, 8CI, 9CI) (CA INDEX NAME)

PH<sub>3</sub>

RN 14378-26-8 HCAPLUS  
CN Rhenium, isotope of mass 188 (8CI, 9CI) (CA INDEX NAME)

188Re

RN 14998-63-1 HCAPLUS  
CN Rhenium, isotope of mass 186 (8CI, 9CI) (CA INDEX NAME)

186Re

RN 23936-60-9 HCAPLUS  
CN Phosphine, 1,2-ethanediylbis[dimethyl]- (9CI) (CA INDEX NAME)

Me<sub>2</sub>P-CH<sub>2</sub>-CH<sub>2</sub>-PMe<sub>2</sub>

RN 83622-85-9 HCAPLUS  
CN Phosphine, tris(3-methoxypropyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{(CH}_2\text{)}_3\text{-OMe} \\ | \\ \text{MeO-(CH}_2\text{)}_3\text{-P-(CH}_2\text{)}_3\text{-OMe} \end{array}$$

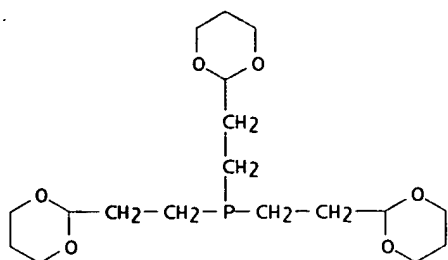
RN 125585-84-4 HCAPLUS  
CN Phosphine, [2,2-bis(methoxymethyl)-1,3-propanediyl]bis[dimethyl]- (9CI)  
(CA INDEX NAME)

$$\begin{array}{c} \text{CH}_2\text{-OMe} \\ | \\ \text{Me}_2\text{P-CH}_2\text{-C-CH}_2\text{-PMe}_2 \\ | \\ \text{CH}_2\text{-OMe} \end{array}$$

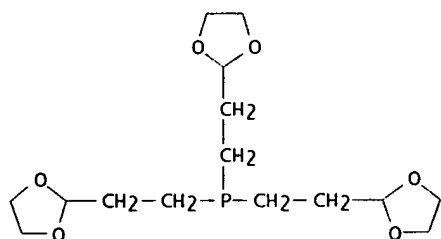
RN 127502-06-1 HCAPLUS  
CN 3,12-Dioxa-6,9-diphosphatetradecane, 6,9-bis(2-ethoxyethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{EtO-CH}_2\text{-CH}_2 \qquad \qquad \text{CH}_2\text{-CH}_2\text{-OEt} \\ | \qquad \qquad \qquad | \\ \text{EtO-CH}_2\text{-CH}_2\text{-P-CH}_2\text{-CH}_2\text{-P-CH}_2\text{-CH}_2\text{-OEt} \end{array}$$

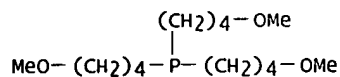
RN 142996-85-8 HCAPLUS  
CN Phosphine, tris[2-(1,3-dioxan-2-yl)ethyl]- (9CI) (CA INDEX NAME)



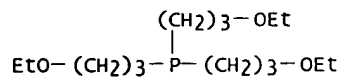
RN 142996-86-9 HCAPLUS  
CN Phosphine, tris[2-(1,3-dioxolan-2-yl)ethyl]- (9CI) (CA INDEX NAME)



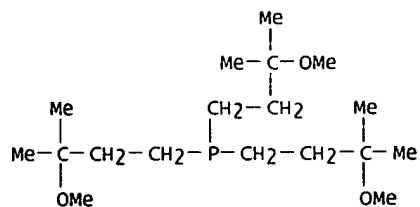
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CN Phosphine, tris(4-methoxybutyl)- (9CI) (CA INDEX NAME)



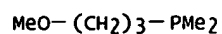
RN 142996-88-1 HCAPLUS  
CN Phosphine, tris(3-ethoxypropyl)- (9CI) (CA INDEX NAME)



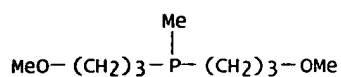
RN 142996-90-5 HCAPLUS  
CN Phosphine, tris(3-methoxy-3-methylbutyl)- (9CI) (CA INDEX NAME)



RN 142996-92-7 HCAPLUS  
CN Phosphine, (3-methoxypropyl)dimethyl- (9CI) (CA INDEX NAME)

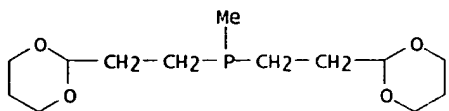


RN 142996-93-8 HCAPLUS  
CN Phosphine, bis(3-methoxypropyl)methyl- (9CI) (CA INDEX NAME)



RN 150565-57-4 HCAPLUS

CN Phosphine, bis[2-(1,3-dioxan-2-yl)ethyl]methyl- (9CI) (CA INDEX NAME)



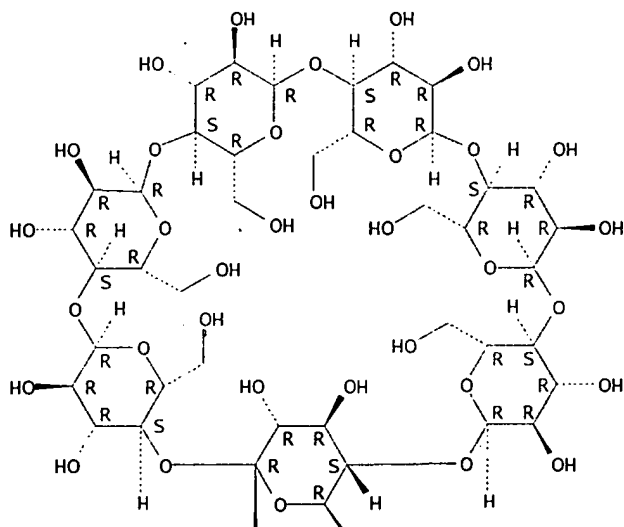
IT 7585-39-9, .beta.-Cyclodextrin 10016-20-3,  
 .alpha.-Cyclodextrin 10016-20-3D, .alpha.-Cyclodextrin,  
 Hydroxypropyl and hydroxyethyl ethers 12619-70-4, Cyclodextrin  
 17465-86-0, .gamma.-Cyclodextrin 51166-71-3,  
 2,6-Di-o-methyl-.beta.-cyclodextrin  
 RL: BIOL (Biological study)  
 (radiopharmaceuticals stabilization with)

RN 7585-39-9 HCAPLUS

CN .beta.-Cyclodextrin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



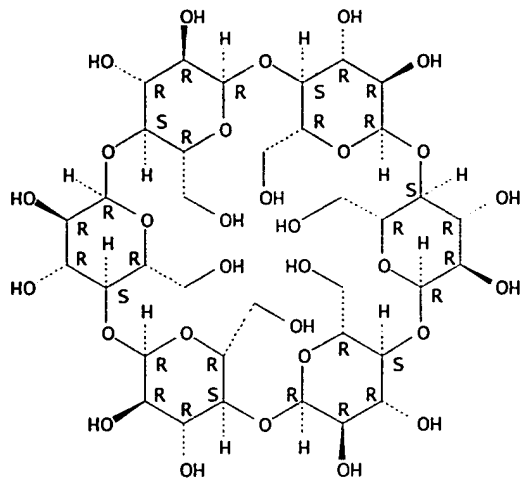
PAGE 2-A



RN 10016-20-3 HCAPLUS

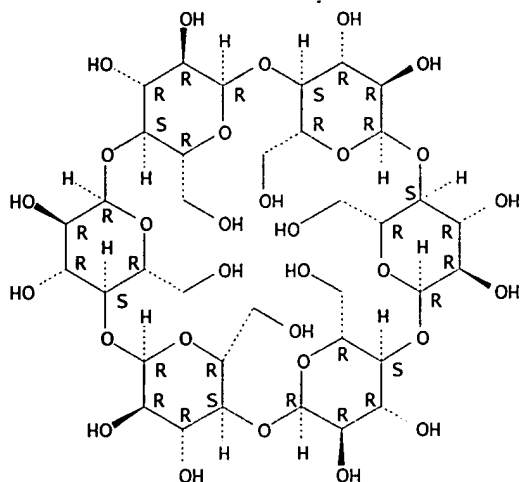
CN .alpha.-Cyclodextrin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 10016-20-3 HCAPLUS  
CN .alpha.-Cyclodextrin (8CI, 9CI) (CA INDEX NAME)

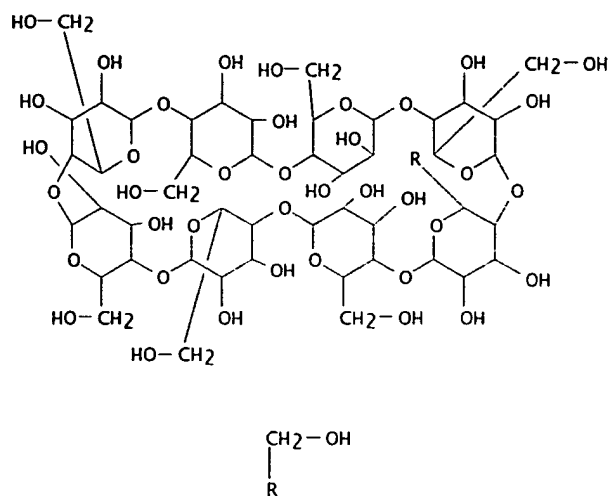
Absolute stereochemistry.



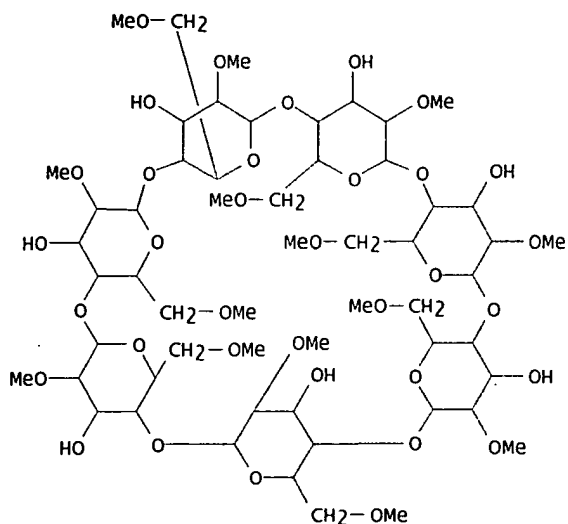
RN 12619-70-4 HCAPLUS  
CN Cyclodextrin (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

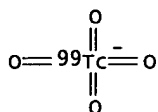
RN 17465-86-0 HCAPLUS  
CN .gamma.-Cyclodextrin (8CI, 9CI) (CA INDEX NAME)



RN 51166-71-3 HCAPLUS  
 CN .beta.-Cyclodextrin, 2A,2B,2C,2D,2E,2F,2G,6A,6B,6C,6D,6E,6F,6G-tetradeca-O-methyl- (9CI) (CA INDEX NAME)



IT 23288-60-0  
 RL: PROC (Process)  
 (stabilization of, with cyclic oligosaccharides)  
 RN 23288-60-0 HCAPLUS  
 CN Technetate (99TcO41-), sodium, (T-4)- (9CI) (CA INDEX NAME)



Na<sup>+</sup>

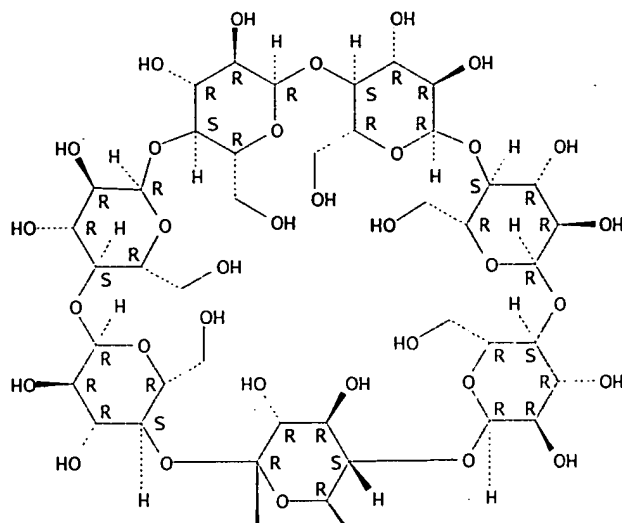
IT 7585-39-9D, .beta.-Cyclodextrin, Hydroxypropyl, hydroxyethyl and  
 SEARCHED BY SUSAN HANLEY 305-4053



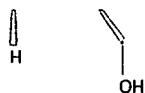
carboxymethyl ethers  
 RL: BIOL (Biological study)  
 (sulfated, radiopharmaceuticals stabilization with)  
 RN 7585-39-9 HCAPLUS  
 CN .beta.-Cyclodextrin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

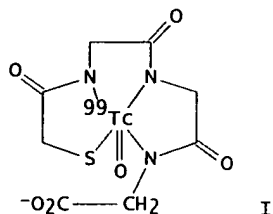


PAGE 2-A



=&gt; d bib abs hitstr 128 4

L28 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1993:490215 HCAPLUS  
 DN 119:90215  
 TI Technetium-99m MAG3: labeling conditions and quality control  
 AU Nosco, Dennis L.; Wolfangel, Robert G.; Bushman, Michael J.; Grummon, Glenn D.; Marmion, Mary E.; Pipes, David W.  
 CS Mallinckrodt Med. Inc., St. Louis, MO, 63034, USA  
 SO J. Nucl. Med. Technol. (1993), 21(2), 69-74  
 CODEN: JNMTB4; ISSN: 0091-4916  
 DT Journal  
 LA English  
 GI



AB Technescan MAG3 (I), a radiopharmaceutical kit developed by Mallinckrodt Medical Inc., St. Louis, MO, for use in the evaluation of renal tubular function, was tested under a variety of labeling conditions. The effects of varying time (0-30 min) and heating temp. (90.degree.-110.degree.), technetium-99m activity (0-150 mCi) and vol. (4-10 mL), timing and vol. (0-10 mL) of air addn. to the kit, and age of generator eluate (0-12 h) used in reconstitution were examd. Anal. of the results from the above expts. show that, when used within the parameters described in the package insert, the reconstituted Technescan MAG3 kit gives acceptable radiochem. purity (i.e., >90%) every time. Of special note, results from these studies indicate that 99mTc generator eluate which has stood for >6 h after elution should not be used to label the kits. A novel quality control method using a C18 Sep Pak (Millipore Corp., Milford, MA) is described. This method is easy and quick to perform and gives excellent accuracy, with results similar to those obtained using high performance liq. chromatog.

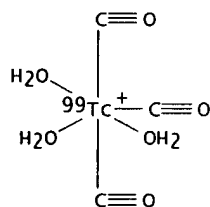
IT 7440-26-8P, Technetium, preparation  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and quality control of metastable, kidney scintigraphy in relation to)

RN 7440-26-8 HCAPLUS  
 CN Technetium (8CI, 9CI) (CA INDEX NAME)

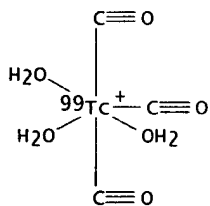
Tc

=&gt; d bib abs hitstr 147 1

L47 ANSWER 1 OF 8 HCAPLUS , COPYRIGHT 2001 ACS  
 AN 2000:614935 HCAPLUS  
 DN 133:316824  
 TI Synthesis of  $[\text{Tc}(\text{CO})_3(\text{H}_2\text{O})_3]^+$  ion and study of its reaction with hydroxyl ion in aqueous solutions  
 AU Gorshkov, N. I.; Lumpov, A. A.; Miroslovov, A. E.; Suglovov, D. N.  
 CS Khlopin Radium Institute, Research and Production Association, St. Petersburg, Russia  
 SO Radiochemistry (Moscow) (2000), 42(3), 231-235  
 CODEN: RDIOEO; ISSN: 1066-3622  
 PB MAIK Nauka/Interperiodica Publishing  
 DT Journal  
 LA English  
 AB Two procedures for prepn. of  $[\text{Tc}(\text{CO})_3(\text{H}_2\text{O})_3]^+$  complex in aq. solns. are discussed: (1) dissoln. of  $\text{Tc}(\text{CO})_5\text{X}$  ( $\text{X} = \text{Cl}, \text{Br}, \text{I}$ ) in hot  $\text{H}_2\text{O}$  and (2) carbonylation of  $\text{KTCO}_4$  in an aq. soln. in an autoclave. Reaction of  $[\text{Tc}(\text{CO})_3(\text{H}_2\text{O})_3]^+$  with hydroxyl ion was studied by  $^{99}\text{Tc}$  NMR spectroscopy and potentiometry. At the ratio  $\text{OH}/\text{Tc} < 1$ ,  $[\text{Tc}(\text{CO})_3(\text{H}_2\text{O})_2(\text{OH})]$  monomer is formed, which polymerizes with time to give the dimer  $[\text{Tc}(\text{CO})_3(\text{H}_2\text{O})(\text{OH})]_2$  and then the tetramer  $[\text{Tc}(\text{CO})_3(\text{OH})]_4$ . At  $\text{OH}/\text{Tc} > 1$  the polymn. is sharply decelerated. A complex with hypothetical compn.  $[\text{Tc}(\text{CO})_3(\text{H}_2\text{O})(\text{OH})_2]^-$  is formed along with the monohydroxo complex at  $\text{NaOH}$  concn.  $> 1.5 \text{ M}$ .  
 IT 301661-20-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and hydrolysis in aq. soln.)  
 RN 301661-20-1 HCAPLUS  
 CN Technetium(1+)- $^{99}\text{Tc}$ , triaquatricarbonyl-, chloride, (OC-6-22)- (9CI) (CA INDEX NAME)

●  $\text{Cl}^-$ 

IT 163932-31-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and reaction with hydroxyl ion in aq. soln.)  
 RN 163932-31-8 HCAPLUS  
 CN Technetium(1+)- $^{99}\text{Tc}$ , triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



RE.CNT 10

RE  
 (1) Alberto, R; J Organomet Chem 1995, V493, P119 HCAPLUS  
 (2) Alberto, R; Polyhedron 1998, V17(7), P1133 HCAPLUS  
 (6) Egli, A; Organometallics 1997, V16, P1833 HCAPLUS  
 (7) Miroslovov, A; Radiokhimiya 1989, V31(6), P33 HCAPLUS

SEARCHED BY SUSAN HANLEY 305-4053

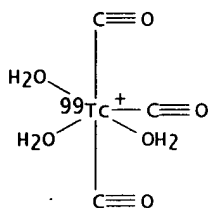
Page 1

CEPERLEY 09/576,960

(8) Miroslovov, A; Radiokhimiya 1990, V32(6), P14 HCAPLUS  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs hitstr 147 2

L47 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 AN 2000:572987 HCAPLUS  
 DN 133:290298  
 TI EXAFS analyses of technetium(I) carbonyl complexes - stability studies in solutions  
 AU Seifert, S.; Kunstler, J.-U.; Gupta, A.; Funke, H.; Reich, T.; Hennig, C.; Rossberg, A.; Pietzsch, H.-J.; Alberto, R.; Johannsen, B.  
 CS Research Center Rossendorf, Institute of Bioinorganic and Radiopharmaceutical Chemistry, Dresden, D-01314, Germany  
 SO Radiochim. Acta (2000), 88(3-4), 239-245  
 CODEN: RAACAP; ISSN: 0033-8230  
 PB R. Oldenbourg Verlag  
 DT Journal  
 LA English  
 AB EXAFS analyses were successfully used to det. the structure of Re and Tc carbonyl thioether complexes in solid and liq. samples. In connection with chromatog. and mass spectrometric methods the behavior of Tc carbonyl dithioether complexes in aq. soln. was studied. Complexes contg. a bidentate thioether ligand are able to react with H<sub>2</sub>O by exchange of the chloride ion, which gave a cationic complex with pseudo first order aquation kinetics. As expected, the exchange proceeds faster at the no-carrier-added level because of concn. differences.  
 IT 163932-31-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of metastable)  
 RN 163932-31-8 HCAPLUS  
 CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



RE.CNT 23  
 RE  
 (2) Abel, E; Polyhedron 1995, V14, P585 HCAPLUS  
 (3) Alberto, R; J Am Chem Soc 1998, V120, P7987 HCAPLUS  
 (4) Alberto, R; J Am Chem Soc 1999, V121, P6076 HCAPLUS  
 (5) Alberto, R; J Am Chem Soc 1999, V121, P6076 HCAPLUS  
 (6) Alberto, R; J Organomet Chem 1995, V493, P119 HCAPLUS  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs hitstr 147 3

L47 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2001 ACS

AN 2000:222269 HCAPLUS

DN 133:55391

TI Influence of the Denticity of Ligand Systems on the in Vitro and in Vivo Behavior of  $^{99m}\text{Tc}(\text{I})$ -Tricarbonyl Complexes: A Hint for the Future Functionalization of Biomolecules

AU Schibli, Roger; La Bella, Roberto; Alberto, Roger; Garcia-Garayoa, Elisa; Ortner, Kirstin; Abram, Ulrich; Schubiger, P. A.

CS Center for Radiopharmaceutical Science of the ETH Zuerich, Paul Scherrer Institute, Villigen, CH-5232, Switz.

SO Bioconjugate Chem. (2000), 11(3), 345-351

CODEN: BCCHE5; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

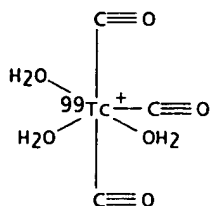
AB Functionalization of biol. relevant mols. for the labeling with the novel  $\text{fac-}[^{99m}\text{Tc}(\text{OH}_2)_3(\text{CO})_3]^+$  precursor has gained considerable attention recently. Therefore, we tested seven different tridentate (histidine L1, iminodiacetic acid L2, N-2-picolylamineacetic acid L3, N,N-2-picolylaminodiacetic acid L4) and bidentate (histamine L5, 2-picolinic acid L6, 2,4-dipicolinic acid L7) ligand systems, with the potential to be bifunctionalized and attached to a biomol. The ligands allowed mild radiolabeling conditions with  $\text{fac-}[^{99m}\text{Tc}(\text{OH}_2)_3(\text{CO})_3]^+$  (30 min, 75 .degree.C). The ligand concns. necessary to obtain yields of >95% of the corresponding organometallic complexes 1-7 ranged from 10<sup>-6</sup> to 10<sup>-4</sup> M. Complexes of the general formula " $\text{fac-}[^{99m}\text{TcL}(\text{CO})_3]$ " (L = tridentate ligand) and " $\text{fac-}[^{99m}\text{Tc}(\text{OH}_2)\text{L}'(\text{CO})_3]$ " (L' = bidentate ligand), resp., were produced. Challenge studies with cysteine and histidine revealed significant displacement of the ligands in complexes 5-7 but only little exchange with complexes 1-4 after 24 h at 37 .degree.C in PBS buffer. However, no decompn. to  $^{99m}\text{TcO}_4^-$  was obsd. under these conditions. All complexes showed a hydrophilic character (log Po/w values ranging from -2.12 to 0.32). Time-dependent FPLC analyses of compds. 1-7 incubated in human plasma at 37 .degree.C showed again no decompn. to  $^{99m}\text{TcO}_4^-$  after 24 h at 37 .degree.C. However, the complexes with bidentate ligands (5-7) became almost completely protein bound after 60 min, whereas the complexes with tridentate coordinated ligands (1-4) showed no reaction with serum proteins. The compds. were tested for their in vivo stability and the biodistribution characteristics in BALB/c mice. The complexes with tridentate coordinated ligand systems (1-4) revealed generally a good and fast clearance from all organs and tissues. On the other hand, the complexes with only bidentate coordinated ligands (5-7) showed a significantly higher retention of activity in the liver, the kidneys, and the blood pool. Detailed radiometric analyses of murine plasma samples, 30 min p.i. of complex  $\text{fac-}[^{99m}\text{TcL1}(\text{CO})_3]$ , 1, revealed almost no reaction of the radioactive complex with the plasma proteins. By contrast, in plasma samples of mice, which were injected with complex  $\text{fac-}[^{99m}\text{Tc}(\text{OH}_2)\text{L5}(\text{CO})_3]^+$ , 5, the entire radioactivity coeluded with the proteins. On the basis of these in vitro and in vivo expts., it appears that functionalization of biomols. with tridentate-chelating ligand systems is preferable for the labeling with  $\text{fac-}[^{99m}\text{Tc}(\text{OH}_2)_3(\text{CO})_3]^+$ , since this will presumably result in radioactive bioconjugates with better pharmacokinetic profiles.

IT 163932-31-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)

(prepn., properties and biodistribution of  $^{99m}\text{Tc}$  tricarbonyl complexes)

RN 163932-31-8 HCAPLUS

CN Technetium(1+)- $^{99}\text{Tc}$ , triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)

RE.CNT 20

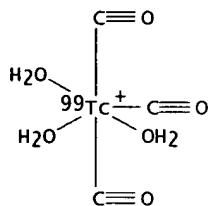
RE

- (2) Alberto, R; J Am Chem Soc 1998, V120, P7987 HCAPLUS
- (3) Alberto, R; J Am Chem Soc 1999, V121, P6076 HCAPLUS
- (4) Alberto, R; Polyhedron 1996, V15, P1079 HCAPLUS
- (5) Alberto, R; Transition Met Chem 1997, V22, P597 HCAPLUS
- (7) Costello, C; J Nucl Med 1983, V24, P353 HCAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs hitstr 147 4

L47 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1999:581733 HCAPLUS  
 DN 132:191251  
 TI In vitro and in vivo evaluation of bidentate, water-soluble phosphine ligands as anchor groups for the organometallic fac-[<sup>99m</sup>Tc(CO)<sub>3</sub>]<sup>+</sup>-core  
 AU Schibli, R.; Katti, K. V.; Higginbotham, C.; Volkert, W. A.; Alberto, R.  
 CS Departments of Department of Radiology, University of Missouri-Columbia, Columbia, MO, USA  
 SO Nucl. Med. Biol. (1999), 26(6), 711-716  
 CODEN: NMBIEO; ISSN: 0969-8051  
 PB Elsevier Science Inc.  
 DT Journal  
 LA English  
 AB Complexes fac-[<sup>99m</sup>Tc(OH<sub>2</sub>)(CO)<sub>3</sub>L]<sup>+</sup> [L = bis(bis(hydroxymethyl)phosphino)ethane or bis(bis(hydroxymethyl)phosphino)benzene] were prepd. No decompn. or alteration of the complexes was obsd. even in the presence of excess histidine, cysteine, or human serum albumin. Expts. performed in normal mice demonstrated a fast clearance of the complexes from the blood pool and clearance through the hepatobiliary and the urinary pathways.  
 IT 163932-31-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (synthesis, properties and biodistribution of <sup>99m</sup>Tc hydroxymethylphosphine complexes)  
 RN 163932-31-8 HCAPLUS  
 CN Technetium(1+)-<sup>99</sup>Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



RE.CNT 23  
 RE  
 (1) Abram, U; Inorg Chim Acta 1989, V160, P139 HCAPLUS  
 (3) Alberto, R; J Am Chem Soc 1998, V120, P7987 HCAPLUS  
 (5) Alberto, R; Polyhedron 1996, V15, P1079 HCAPLUS  
 (6) Alberto, R; Radiochim Acta 1997, V79, P99 HCAPLUS  
 (8) Berning, D; Inorg Chem 1997, V36, P2765 HCAPLUS  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT



=&gt; d bib abs hitstr 147 5

L47 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2001 ACS

AN 1998:719299 HCAPLUS

DN 130:1842

TI Method for the preparation of facial metal tricarbonyl compounds and their use in the labeling of biologically active substrates

IN Alberto, Roger; Schibli, Roger; Egli, Andre

PA Mallinckrodt Medical, Inc., USA

SO PCT Int. Appl., 26 pp.

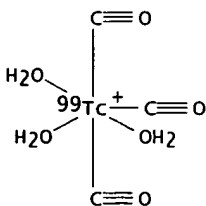
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9848848	A1	19981105	WO 1998-US7979	19980421
W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, GW, HU, ID, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
EP 879606	A1	19981125	EP 1997-201232	19970425
R: CH, LI, NL				
AU 9871413	A1	19981124	AU 1998-71413	19980421
BR 9809409	A	20000613	BR 1998-9409	19980421
EP 1019095	A1	20000719	EP 1998-918501	19980421
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
NO 9905160	A	19991213	NO 1999-5160	19991022
PRAI EP 1997-201232		19970425		
WO 1998-US7979		19980421		
AB	A method is disclosed for prepg. fac-[M(CO) <sub>3</sub> (OH <sub>2</sub> ) <sub>3</sub> ] <sup>+</sup> (M = Mn, <sup>99m</sup> Tc, <sup>186</sup> Re, <sup>188</sup> Re) (I) by reacting a metal in the permethylate form with carbon monoxide and a reducing agent, characterized in that a mixt. of a base, a reducing agent sol. in water but not substantially decompd. by water, and optionally a stabilizing agent, is solved in a water-contg. solvent system contg. a soln. of the metal in the permanganate, pertechnetate or perrhenate form in the presence of carbon monoxide and optionally in the presence of a halide. Also disclosed are to a method of prepg. a labeled compd. with the aid of the compd. I, a method of direct prepn. of labeled compds., a method of labeling of substrates (e.g. amino acids, peptides, proteins, sugars, small receptor binding mols. and body cells) with the aid of compd. I, a kit for the prepn. of a labeling compn., and a kit for the prepn. of a diagnostic of therapeutic pharmaceutical compn.			
IT	163932-31-8P RL: BAC (Biological activity or effector, except adverse); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (facial metal tricarbonyl compd. prepn. and use in labeling of biol. active substrates for diagnosis and therapy)			
RN	163932-31-8 HCAPLUS			
CN	Technetium(1+)- <sup>99</sup> Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)			

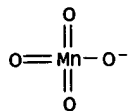
IT 14333-13-2, Permanganate 23288-61-1, <sup>99</sup>Tc-Pertechnetate87552-16-7, <sup>186</sup>Re-perrhenate

RL: RCT (Reactant)

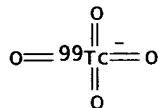
(reaction; facial metal tricarbonyl compd. prepn. and use in labeling of biol. active substrates for diagnosis and therapy)

RN 14333-13-2 HCAPLUS

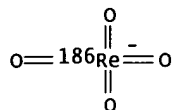
CN Permanganate (MnO41-) (8CI, 9CI) (CA INDEX NAME)



RN 23288-61-1 HCAPLUS  
CN Technetate (99TcO41-), (T-4)- (9CI) (CA INDEX NAME)



RN 87552-16-7 HCAPLUS  
CN Rhenate (186ReO41-), (T-4)- (9CI) (CA INDEX NAME)



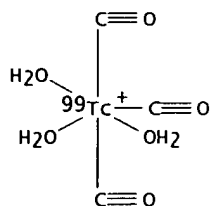
RE.CNT 8  
RE

- (1) Bamford, C; J CHEM SOC DALTON TRANS 1978, 1, P4 HCAPLUS
  - (2) Beck, W; J ORGANOMET CHEM 1980, V191(1), P73 HCAPLUS
  - (3) Centre Nat Rech Scient; EP 0105785 A 1984 HCAPLUS
  - (4) Egli, A; Hydrolysis of the Organometallic Aqua Ion fac-Triaquatricarbonylrhenium(I) Mechanism, pKa, and Formation Constants of the Polynuclear Hydrolysis Products 1997, 18, HCAPLUS
  - (5) Egli, A; ORGANOMETALLICS 1997, V16(9), P1833 HCAPLUS
- ALL CITATIONS AVAILABLE IN THE RE FORMAT

$$\begin{array}{c} \text{O} \\ || \\ \text{O} = \text{}^{99}\text{Tc} - \text{C} = \text{O} \\ || \\ \text{O} \end{array}$$
$$\begin{array}{c} \text{C}\equiv\text{O} \\ | \\ \text{H}_2\text{O} \quad \text{99Tc}^+ \quad \text{C}\equiv\text{O} \\ | \quad \quad | \\ \text{H}_2\text{O} \quad \quad \text{OH}_2 \\ | \\ \text{C}\equiv\text{O} \end{array}$$

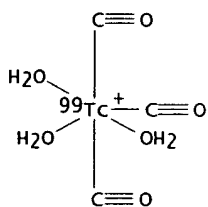
=&gt; d bib abs hitstr 147 7

L47 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1998:328490 HCAPLUS  
 DN 129:109175  
 TI Steps towards [(C5Me5)TcO3]: novel synthesis of [(C5Me5)Tc(CO)3] from  
 [{Tc(.mu.3-OH)(CO)3}4] and oxidation of [(C5Me5)M(CO)3] (M = Tc, Re) with  
 Br2  
 AU Alberto, Roger; Schibli, Roger; Egli, Andre; Abram, Ulrich; Abram, Sonja;  
 Kaden, Thomas A.; Schubiger, P. August  
 CS Division of Radiopharmacy, Paul Scherrer Institute, Villigen, CH-5232,  
 Switz.  
 SO Polyhedron (1998), 17(7), 1133-1140  
 CODEN: PLYHDE; ISSN: 0277-5387  
 PB Elsevier Science Ltd.  
 DT Journal  
 LA English  
 OS CASREACT 129:109175  
 AB [NEt4]2[Tc(Cl)3(CO)3] was prepd. directly from [NBu4][TcO4]. Dissoln. of  
 [NEt4]2[Tc(Cl)3(CO)3] in H2O yielded the aqua ion [Tc(OH2)3(CO)3]+ which,  
 upon titrn. with 1 equiv of OH-, gave tetranuclear [{Tc(.mu.3-OH)(CO)3}4]  
 in quant. yield and of which the structure could be elucidated by x-ray  
 crystallog. Reaction of [{Tc(.mu.3-OH)(CO)3}4] with HC5Me5 gave the  
 important starting material [(C5Me5)M(CO)3] (M = Tc, Re). To achieve  
 complexes in higher oxidn. states with the C5Me5- ligand, oxidn. was  
 performed with [Br2] for the Re and the corresponding Tc complex. Oxidn.  
 in HO2CCF3 yielded cis/trans-[(C5Me5)M(Br)2(CO)2] (M = Tc, Re). Oxidn. in  
 CH2Cl2 gave in both cases the seven coordinate, 18e- M(III) complex  
 [(C5Me5)MBr(CO)3]+. The structure of the Re complex was elucidated.  
 Oxidn. took place at the metal center and the C5Me5- ring to yield  
 [(CO)3M(.mu.-Br)3M(CO)3] as the counterion.  
 IT 163932-31-8P, fac-Triaquatricarbonyltechnetium(1+)-99Tc  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP  
 (Preparation)  
 (prepn. and deprotonation of)  
 RN 163932-31-8 HCAPLUS  
 CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX  
 NAME)



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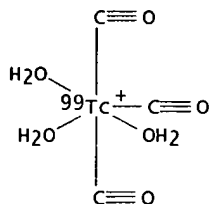
L47 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1998:190636 HCAPLUS  
 DN 128:289372  
 TI Rhenium and technetium carbonyl complexes for the labeling of bioactive molecules. Part 4. N.c.a. preparation of a  $^{99m}\text{Tc}$  carbonyl complex as a potential serotonin 5-HT<sub>2A</sub> receptor binding ligand  
 AU Reisgys, M.; Pietzsch, H. J.; Spies, H.; Alberto, R.  
 CS Institute Bioinorganic Radiopharmaceutical Chemistry, Research Center Rossendorf Inc., Dresden, D-01314, Germany  
 SO Forschungszent. Rossendorf, [Ber.] FZR (1997), FZR-200, 20-22  
 CODEN: FRBFEU  
 DT Report  
 LA English  
 AB Some Re and Tc carbonyl thioether complexes were reported with a potential affinity to serotonin receptors and expts. were described to prep. the Tc complexes at the n.c.a. level.  
 IT 163932-31-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (for prepn. of  $^{99m}\text{Tc}$  carbonyl complex as potential serotonin 5HT<sub>2A</sub> receptor binding ligand)  
 RN 163932-31-8 HCAPLUS  
 CN Technetium(1+)- $^{99}\text{Tc}$ , triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



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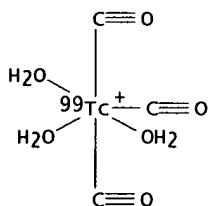
L48 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 AN 2000:518635 HCAPLUS  
 DN 133:91484  
 TI Method of preparing water-soluble carbonyl complexes of short-lived technetium(I) and rhenium(I)  
 IN Gorshkov, N. I.; Lumpov, A. A.; Miroslavov, A. E.; Suglobov, D. N.  
 PA Nauchno-Proizvodstvennoe Ob'edinenie "Radiyvi Institut im. V. G. Khlopina, Russia  
 SO Russ.  
 From: Izobreteniya 1999, (2), 431.  
 CODEN: RUXXE7  
 DT Patent  
 LA Russian  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	RU 2125017	C1	19990120	RU 1997-110991	19970702
AB	Title only translated.				
IT	163932-31-8				
	RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative) (prepg. water-sol. carbonyl complexes of short-lived technetium(I) and rhenium(I))				
RN	163932-31-8 HCAPLUS				
CN	Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)				



=&gt; d bib abs hitstr 148 4

L48 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 AN 2000:289820 HCAPLUS  
 DN 133:331673  
 TI Chemical and biological characterization of technetium(I) and rhenium(I) tricarbonyl complexes with dithioether ligands serving as linkers for coupling the "Tc(CO)3" and "Re(CO)3" moieties to biologically active molecules  
 AU Pietzsch, H.-J.; Gupta, A.; Reisgys, M.; Drews, A.; Seifert, S.; Syhre, R.; Spies, H.; Alberto, R.; Abram, U.; Schubiger, P. A.; Johannsen, B.  
 CS Abteilung für Radiopharmazie, Paul-Scherrer-Inst., Villigen, Switz.  
 SO Wiss.-Tech. Ber. - Forschungszent. Rossendorf (1999), FZR-283, 89-93  
 CODEN: WBFRLF; ISSN: 1437-322X  
 DT Report  
 LA English  
 AB The oxidn. state +1 of technetium has been only examd. in a minor way before a new approach to inert technetium compds. on the basis of Tc(I) carbonyl complexes has been elaborated. Intensive studies in the technetium carbonyl chem. have made available an organometallic Tc(I) aqua ion, [Tc(H2O)3(CO)3]+, from TcO4- under normal pressure. Therefore, the prerequisite to exploit the small [Tc(CO)3]+ moiety for the labeling of biomols. is given. Thioethers with the pi.-acceptor properties of the sulfur show a great potential for coordinating at the metal(I) carbonyl center and several rhenium carbonyl complexes with thioether ligands are known. They may serve in an alternative approach to fully exploit the potential of the [M(CO)3]+ moiety (M = Tc, Re) for the design of radiotracers. The basic chem. of the Tc(I)/Re(I) carbonyl thioethers is described with particular emphasis on applicability to radiotracer design.  
 IT 163932-31-8  
 RL: RCT (Reactant)  
 (prepn. and chem. and biol. characterization of technetium(I) and rhenium(I) tricarbonyl complexes with dithioether ligands serving as linkers for coupling the metal tricarbonyl moieties to biol. active mols.)  
 RN 163932-31-8 HCAPLUS  
 CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



RE.CNT 7

RE

- (1) Alberto, R; J Organomet Chem 1995, V493, P119 HCAPLUS
  - (3) Alberto, R; Topics in Current Chemistry 1996, V176, P149 HCAPLUS
  - (4) Alberto, R; Trans Met Chem 1997, V22, P597 HCAPLUS
  - (5) Egli, A; Organometallics 1997, V16, P1833 HCAPLUS
  - (6) Schibli, R; Inorg Chem 1998, V37, P3509 HCAPLUS
- ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs hitstr 148 5

L48 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2001 ACS

AN 2000:205407 HCAPLUS

DN 132:329035

TI Chemical and Biological Characterization of Technetium(I) and Rhenium(I) Tricarbonyl Complexes with Dithioether Ligands Serving as Linkers for Coupling the Tc(CO)<sub>3</sub> and Re(CO)<sub>3</sub> Moieties to Biologically Active Molecules

AU Pietzsch, H.-J.; Gupta, A.; Reisgys, M.; Drews, A.; Seifert, S.; Syhre, R.; Spies, H.; Alberto, R.; Abram, U.; Schubiger, P. A.; Johannsen, B.

CS Institut fuer Bioanorganische und Radiopharmazeutische Chemie, Forschungszentrum Rossendorf, Dresden, D-01314, Germany

SO Bioconjugate Chem. (2000), 11(3), 414-424

CODEN: BCCHES; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

AB The organometallic precursor (NET<sub>4</sub>)<sub>2</sub>[ReBr<sub>3</sub>(CO)<sub>3</sub>] was reacted with bidentate dithioethers (L) H<sub>3</sub>CSCH<sub>2</sub>CH<sub>2</sub>SR (R = CH<sub>2</sub>CH<sub>2</sub>COOH, CH<sub>2</sub>C.tplbond.CH) and R'SCH<sub>2</sub>CH<sub>2</sub>SR' (R' = CH<sub>3</sub>CH<sub>2</sub>, CH<sub>3</sub>CH<sub>2</sub>OH, and CH<sub>2</sub>COOH) in MeOH to form stable Re(I) tricarbonyl complexes [ReBr(CO)<sub>3</sub>L]. Under these conditions, the functional groups do not participate in the coordination. As a prototypic representative of this type of Re compds., the propargylic group bearing complex [ReBr(CO)<sub>3</sub>(H<sub>3</sub>CSCH<sub>2</sub>CH<sub>2</sub>SCH<sub>2</sub>C.tplbond.CH)] Re2 was studied by x-ray diffraction anal. Its mol. structure exhibits a slightly distorted octahedron with facial coordination of the carbonyl ligands. The potentially tetradentate ligand HOCH<sub>2</sub>CH<sub>2</sub>SCH<sub>2</sub>CH<sub>2</sub>SCH<sub>2</sub>CH<sub>2</sub>OH was reacted with [Re(NO<sub>3</sub>)<sub>3</sub>(CO)<sub>3</sub>]<sub>2</sub><sup>-</sup> to yield a cationic complex [Re(CO)<sub>3</sub>(HOCH<sub>2</sub>CH<sub>2</sub>SCH<sub>2</sub>CH<sub>2</sub>SCH<sub>2</sub>CH<sub>2</sub>OH)]NO<sub>3</sub> Re8 which shows the coordination of one hydroxy group. Re8 was characterized by correct elemental anal., IR spectroscopy, capillary electrophoresis, and x-ray diffraction anal. Ligand exchange reaction of the carboxylic group bearing ligands H<sub>3</sub>CSCH<sub>2</sub>CH<sub>2</sub>SCH<sub>2</sub>CH<sub>2</sub>COOH and HOOCCH<sub>2</sub>SCH<sub>2</sub>CH<sub>2</sub>SCH<sub>2</sub>COOH with (NET<sub>4</sub>)<sub>2</sub>[ReBr<sub>3</sub>(CO)<sub>3</sub>] in H<sub>2</sub>O and with equimolar amts. of NaOH led to complexes in which the bromide is replaced by the carboxylic group. The x-ray structure anal. of [Re(CO)<sub>3</sub>(OOCCH<sub>2</sub>SCH<sub>2</sub>CH<sub>2</sub>SCH<sub>2</sub>COOH)] Re6 shows the 2nd carboxylic group noncoordinated offering an ideal site for functionalization or coupling a biomol. The no-carrier-added prepn. of the analogous <sup>99m</sup>Tc(I) carbonyl thioether complexes could be performed using the precursor fac-[<sup>99m</sup>Tc(H<sub>2</sub>O)<sub>3</sub>(CO)<sub>3</sub>]<sup>+</sup>, with yields up to 90%. The behavior of the Cl contg. <sup>99m</sup>Tc complex [<sup>99m</sup>TcCl(CO)<sub>3</sub>(CH<sub>3</sub>CH<sub>2</sub>SCH<sub>2</sub>CH<sub>2</sub>SCH<sub>2</sub>CH<sub>3</sub>)] Tc1 in aq. soln. at physiol. pH value was studied. In saline, the chromatog. sepd. compd. was stable for at least 120 min. However, in chloride-free aq. soln., a H<sub>2</sub>O-coordinated cationic species Tc1a of the proposed compn. [<sup>99m</sup>Tc(H<sub>2</sub>O)(CO)<sub>3</sub>(CH<sub>3</sub>CH<sub>2</sub>SCH<sub>2</sub>CH<sub>2</sub>SCH<sub>2</sub>CH<sub>3</sub>)]<sup>+</sup> occurred. The cationic charge of the conversion product was confirmed by capillary electrophoresis. By the introduction of a carboxylic group into the thioether ligand as a 3rd donor group, the conversion could be suppressed and thus the neutrality of the complex preserved. Biodistribution studies in the rat demonstrated for the neutral complexes [<sup>99m</sup>TcCl(CO)<sub>3</sub>(CH<sub>3</sub>CH<sub>2</sub>SCH<sub>2</sub>CH<sub>2</sub>SCH<sub>2</sub>CH<sub>3</sub>)] Tc1 and [<sup>99m</sup>TcCl(CO)<sub>3</sub>(CH<sub>2</sub>SCH<sub>2</sub>CH<sub>2</sub>SCH<sub>2</sub>C.tplbond.CH)] Tc2 a significant initial brain uptake (1.03 ± 0.25% and 0.78 ± 0.08% ID/organ at 5 min p.i.). Challenge expts. with glutathione clearly indicated that no transchelation reaction occurs in vivo.

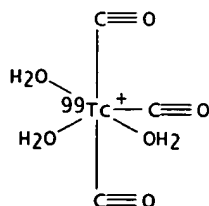
IT 163932-31-8

RL: RCT (Reactant)

(reactant for prepn. of rhenium/technetium-99m thioether carbonyl complexes)

RN 163932-31-8 HCAPLUS

CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)





RE.CNT 62

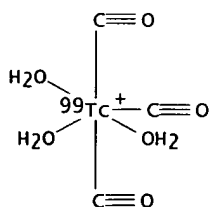
RE

- (2) Abel, E; Polyhedron 1995, V14, P585 HCAPLUS
- (3) Abram, U; Inorg Chim Acta 1996, V248, P193 HCAPLUS
- (4) Abram, U; Polyhedron 1998, V17, P1303 HCAPLUS
- (5) Adams, R; Organometallics 1995, V14, P1748 HCAPLUS
- (6) Alberto, R; J Am Chem Soc 1998, V120(31), P7987 HCAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs hitstr 148 7

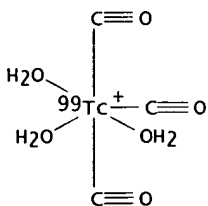
L48 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1999:775044 HCAPLUS  
 DN 132:233705  
 TI Organometallic 99mTc-aquaion labels peptide to an unprecedented high specific activity  
 AU Egli, Andre; Alberto, Roger; Tannahill, Lesley; Schibli, Roger; Abram, Ulrich; Schaffland, Andreas; Waibel, Robert; Tourwe, Dirk; Jeannin, Lauren; Iterbeke, Koen; Schubiger, P. August  
 CS Center for Radiopharmaceutical Science, Paul Scherrer Institute, Villigen-PSI, CH-5232, Switz.  
 SO J. Nucl. Med. (1999), 40(11), 1913-1917  
 CODEN: JNMEAQ; ISSN: 0161-5505  
 PB Society of Nuclear Medicine, Inc.  
 DT Journal  
 LA English  
 AB A new peptide labeling method that uses the organometallic aquaion [99mTc(H<sub>2</sub>O)<sub>3</sub>(CO)<sub>3</sub>]<sup>+</sup> has been developed. Methods: A selection of amino acids was labeled at different concns. with the organometallic aquaion, and the labeling yield was detd. by high-performance liq. chromatog. This investigation has shown histidine to be a very potent ligand, with specific activities of up to 6 TBq/.mu.mol (160 Ci/.mu.mol) ligand. Histidine derivs. have been coupled to neurotensin(8-13) (NT[8-13]) and have been labeled with the aquaion, resulting in high specific activities with (N.alpha.-histidinyl)acetic acid-NT(8-13) similar to those with histidine. Results: Histidine derivs. of NT(8-13) labeled using this approach fully retained their receptor affinity, showing K<sub>D</sub> values of all investigated NT analogs below 1 nmol/L on colon carcinoma HT29 cells. Biodistribution expts. in BALB/c mice showed complete clearance of (N.alpha.-histidinyl)acetic acid-NT(8-13) from the blood after 24 h and no unwanted accumulation in any tissue. Conclusion: The novel labeling method using the organometallic 99mTc-aquaion combines the advantage of highest specific activities with minimal functionalization of proteins and peptides under retention of biol. affinity.  
 IT 163932-31-8D, amino acids and peptides labeled with  
 RL: BPR (Biological process); FMU (Formation, unclassified); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process) (peptide labeling with 99mTc-aquaion and biodistribution)  
 RN 163932-31-8 HCAPLUS  
 CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



RE.CNT 17  
 RE  
 (1) Abrams, M; Inorg Chem 1983, V22, P2798 HCAPLUS  
 (2) Alberto, R; J Am Chem Soc 1998, V120, P7987 HCAPLUS  
 (3) Alberto, R; J Chem Soc Dalton Trans 1994, P2815 HCAPLUS  
 (5) Alberto, R; Polyhedron 1996, V15, P1079 HCAPLUS  
 (6) Alberto, R; Radiochim Acta 1997, V79, P99 HCAPLUS  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs hitstr 148 8

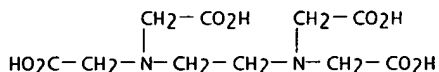
L48 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1995:555392 HCAPLUS  
 DN 123:24574  
 TI Metal carbonyl syntheses XXII. Low pressure carbonylation of [MOC14]- and [MO4]-: the technetium(I) and rhenium(I) complexes [NEt4]2[MC13(CO)3]  
 AU Alberto, Roger; Schibli, Roger; Egli, Andre; Schubiger, P. August; Herrmann, Wolfgang A.; Artus, Georg; Abram, Ulrich; Kaden, Thomas A.  
 CS Division of Radiopharmacy, Paul Scherrer Institut, Villigen, CH-5232, Switz.  
 SO J. Organomet. Chem. (1995), 493(1-2), 119-27  
 CODEN: JORCAI; ISSN: 0022-328X  
 DT Journal  
 LA English  
 AB Low pressure carbonylation (1 atm) of [MOC14]- or [MO4]- in the presence of BH3-THF and halides X- results in the clean formation of [NEt4]2[MX3(CO)3] contg. monovalent Re or Tc (M = Re or Tc; X = Cl or Br). In the case of the radioactive element Tc this low pressure synthesis is an important progress since potential hazards of traditional high pressure carbonylations are thus avoided. [NEt4]2[ReBr3(CO)3] crystallizes in the space group P.hivin.1 with a 10.166(2), b 16.393(4), c 17.243(5) .ANG., and .alpha. 69.27(2), .beta. 86.42(2), .gamma. 88.61(2).degree., Z = 4 and V = 2682(1) .ANG.3. [NEt4][MX3(CO)3] is a versatile precursor compd. of other Re(I) and Tc(I) complexes; substitution of the halide ligands by a variety of .sigma.-donor ligands is facile even under mild conditions. Examples include reactions with CN-tBu to yield quant. TcCl(CN-tBu)2(CO)3 and with a tetradentate phosphine ligand to yield dinuclear [Re2Br2(CO)6(tetraphos)]. The x-ray structures of both compds. were detd. Dissoln. of [NEt4]2[MX3(CO)3] in H2O under aerobic conditions results in the unusual organometallic aqua cation [M(OH2)3(CO)3]+; this species is stable in H2O for days (IR spectroscopy).  
 IT 163932-31-8, fac-Triaquatricarbonyltechnetium(1+)-99Tc  
 RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative) (prepn. of)  
 RN 163932-31-8 HCAPLUS  
 CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



=&gt; d bib abs hitstr 161 1

L61 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1998:344354 HCAPLUS  
 DN 129:31312  
 TI Granulates based on agglomerated colored clay particles, and their manufacture and use  
 IN Manz, Joachim; Molders, Armand  
 PA Cerdec Aktiengesellschaft Keramische Farben, Germany  
 SO Eur. Pat. Appl., 6 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 842911	A1	19980520	EP 1997-119583	19971108
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRAI	DE 1996-19646944		19961113		
AB	The granulates are obtained by contacting spray granulated colorless clays with a soln. of .gtoreq.1 org. complexes of coloring metal ions. The granulates are used for manufg. unglazed clay tiles. Thus, 45.6 kg SG-FG (spray granulated colorless clay) was mixed with 3.6 kg Merapon 2005 (Co hydroxycarboxylate), and the resulting granules used for manufg. blue-stained clay tiles.				
IT	60-00-4D, EDTA, metal complexes RL: NUU (Nonbiological use, unclassified); USES (Uses) (coloring with; of spray-granulated colorless clays, for colored tile manuf.)				
RN	60-00-4 HCAPLUS				
CN	Glycine, N,N'-1,2-ethanediybis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)				



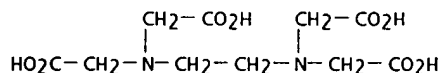
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L61 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 IC ICM C04B033-14  
 CC 57-5 (Ceramics)  
 ST colorless clay granule org complex; coloring metal org complex clay; cobalt hydroxycarboxylate complex clay; Merapon 2005 cobalt hydroxycarboxylate; blue clay tile cobalt hydroxycarboxylate  
 IT Granular materials  
 (clays, coloring of; with org. metal complexes, for colored tile manuf.)  
 IT Coordination compounds  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (coloring with; of spray-granulated colorless clays, for colored tile manuf.)  
 IT Clays, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (colorless, spray-granulated, coloring of; with org. metal complexes, for colored tile manuf.)  
 IT Amino acids, uses  
 Hydroxy carboxylic acids  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (metal complexes, coloring with; of spray-granulated colorless clays, for colored tile manuf.)  
 IT 207869-24-7, Merapon 2011  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (Co hydroxycarboxylate V salt, coloring with; of spray-granulated colorless clays, for gray-colored tile manuf.)  
 IT 207869-26-9, Merapon 2015  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (Co-Fe hydroxycarboxylate, coloring with; of spray-granulated colorless clays, for black-green-colored tile manuf.)  
 IT 207869-28-1, Merapon 2051  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)

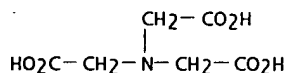
- (Cr salt, coloring with; of spray-granulated colorless clays, for terra cotta-brown-colored tile manuf.)
- IT 147335-52-2, Merapon 2009  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (Cr-Fe hydroxycarboxylate, coloring with; of spray-granulated colorless clays, for chocolate-brown-colored tile manuf.)
- IT 144113-76-8, Merapon 2020  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (Fe hydroxycarboxylate, coloring with; of spray-granulated colorless clays, for gray-colored tile manuf.)
- IT 207869-21-4, Merapon 2004  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (Fe-Co hydroxycarboxylate, coloring with; of spray-granulated colorless clays, for black-colored tile manuf.)
- IT 207869-23-6, Merapon 2006  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (Fe-Mn-aminopolycarboxylate-hydroxycarboxylate, coloring with; of spray-granulated colorless clays, for gray-brown-colored tile manuf.)
- IT 207869-20-3, Merapon 1188 207869-25-8, Merapon 2014  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (Mn polycarboxylate, coloring with; of spray-granulated colorless clays, for colored tile manuf.)
- IT 207869-22-5, Merapon 2005  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (cobalt hydroxycarboxylate, coloring with; of spray-granulated colorless clays, for blue-colored tile manuf.)
- IT 60-00-4D, EDTA, metal complexes 77-92-9D, metal complexes  
 87-69-4D, metal complexes 7440-05-3D, Palladium, chelates 7440-18-8D, Ruthenium, chelates  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (coloring with; of spray-granulated colorless clays, for colored tile manuf.)
- IT 207869-27-0, Merapon 2030  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (vanadium chelate, coloring with; of spray-granulated colorless clays, for blue-colored tile manuf.)

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L61 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1997:419232 HCAPLUS  
 DN 127:155934  
 TI Modification of 4-(2-pyridylazo)-resorcinol postcolumn reagent selectivity through competitive equilibria with chelating ligands  
 AU Co, Anne C.; Ko, Angela N.; Ye, Liwen; Lucy, Charles A.  
 CS Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.  
 SO J. Chromatogr., A (1997), 770(1 + 2), 69-74  
 CODEN: JCRAEY; ISSN: 0021-9673  
 PB Elsevier  
 DT Journal  
 LA English  
 AB Aminopolycarboxylate ligands were added to the 4-(2-pyridylazo)-resorcinol (PAR) postcolumn reagent to alter the reagent selectivity towards transition metals. Addn. of EDTA completely suppressed the reaction between PAR and the metal ions. Addn. of 0.1 mM nitrilotriacetic acid (NTA) to 1 mM PAR lowered the response to specific transition metal ions, but completely suppressed the PAR response to the lanthanides. Increasing the NTA concn. to 8 mM resulted in complete suppression of the PAR response to all metal ions except Cu<sup>2+</sup> and Co<sup>2+</sup>, for which the detection limits were 3 and 1 ng, resp. The obsd. selectivity results from the slow rate of conversion of metal ions from the M(NTA)<sub>24-</sub> form to M(PAR)<sub>2</sub>.  
 IT 60-00-4, EDTA, uses 139-13-9, Nitrilotriacetic acid  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (uses) (transition metal and lanthanides detn. by HPLC using pyridylazo resorcinol postcolumn reagent and modification of reagent selectivity with addn. of EDTA and NTA)  
 RN 60-00-4 HCAPLUS  
 CN Glycine, N,N'-1,2-ethanediybis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)



RN 139-13-9 HCAPLUS  
 CN Glycine, N,N-bis(carboxymethyl)- (9CI) (CA INDEX NAME)



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L61 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 CC 79-4 (Inorganic Analytical Chemistry)  
 ST modification pyridylazo resorcinol postcolumn reagent selectivity; competitive equil chelating ligand reagent selectivity; metal detn HPLC pyridylazo resorcinol reagent  
 IT Chelation  
 HPLC (transition metal and lanthanides detn. by HPLC using pyridylazo resorcinol postcolumn reagent and modification of reagent selectivity with addn. of EDTA and NTA)  
 IT Rare earth ions  
 Transition metal ions  
 RL: ANT (Analyte); ANST (Analytical study) (transition metal and lanthanides detn. by HPLC using pyridylazo resorcinol postcolumn reagent and modification of reagent selectivity with addn. of EDTA and NTA)  
 IT Ligands  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (uses) (transition metal and lanthanides detn. by HPLC using pyridylazo resorcinol postcolumn reagent and modification of reagent selectivity with addn. of EDTA and NTA)  
 IT 1141-59-9, 4-(2-Pyridylazo)-resorcinol

SEARCHED BY SUSAN HANLEY 305-4053

Page 3

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
 (modification of 4-(2-pyridylazo)-resorcinol postcolumn reagent  
 selectivity through competitive equil. with chelating ligands)

IT 7429-91-6, Dysprosium, analysis 7439-94-3, Lutetium, analysis  
 7439-96-5, Manganese, analysis 7440-02-0, Nickel, analysis  
 7440-19-9, Samarium, analysis 7440-44-0, Carbon, analysis 7440-48-4,  
 Cobalt, analysis 7440-50-8, Copper, analysis 7440-52-0, Erbium,  
 analysis 7440-54-2, Gadolinium, analysis

RL: ANT (Analyte); ANST (Analytical study)  
 (transition metal and lanthanides detn. by HPLC using pyridylazo  
 resorcinol postcolumn reagent and modification of reagent selectivity  
 with addn. of EDTA and NTA)

IT 60-00-4, EDTA, uses 139-13-9, Nitrilotriacetic acid

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
 (transition metal and lanthanides detn. by HPLC using pyridylazo  
 resorcinol postcolumn reagent and modification of reagent selectivity  
 with addn. of EDTA and NTA)

=&gt; d bib abs hitstr 161 3

L61 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2001 ACS

AN 1993:517749 HCAPLUS

DN 119:117749

TI Preparation of bifunctional ligands for metals as imaging agent for diagnosis

IN Hashifuchi, Yuji; Iwai, Kumiko; Seri, Shigemi; Kondo, Susumu; Azuma, Makoto

PA Nihon Medi-Physics Co., Ltd., Japan

SO Eur. Pat. Appl., 14 pp.

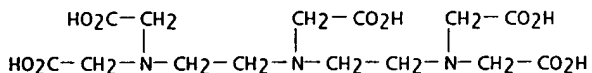
CODEN: EPXXDW

DT Patent

LA English

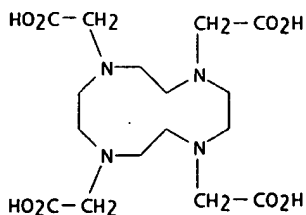
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 535668	A1	19930407	EP 1992-116804	19921001
	EP 535668	B1	19960807		
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE				
	JP 05097712	A2	19930420	JP 1991-258017	19911004
	JP 2894879	B2	19990524		
	US 5271924	A	19931221	US 1992-952992	19920929
	CA 2079493	AA	19930405	CA 1992-2079493	19920930
	AT 141058	E	19960815	AT 1992-116804	19921001
	ES 2093163	T3	19961216	ES 1992-116804	19921001
	AU 9226191	A1	19930408	AU 1992-26191	19921002
	AU 650791	B2	19940630		
	US 5352431	A	19941004	US 1993-119387	19930913
PRAI	JP 1991-258017		19911004		
	US 1992-952992		19920929		
OS	MARPAT 119:117749				
AB	The bifunctional ligand comprises galactosamino-oligosaccharide and polyaminopolycarboxylic acid. To galactosamino-pentamer in phosphate buffer was added 1-(p-isothiocyanatebenzyl)diethylenetriaminepentaacetic acid, to give after workup their reaction product which in distd. H2O was added to 0.1M citrate buffer followed by InCl3 (148MBeq) to give the complex (I) having a radiochem. purity of 100%. The 1/2 life of I in blood was 55 min, clin. effective retention in blood and good excretion in urine.				
IT	67-43-6DP, Diethylenetriamine pentaacetic acid, reaction products with galactosamino-oligosaccharides, metal complexes 60239-18-1DP, 1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraacetic acid, reaction products with galactosamino-oligosaccharides, metal complexes				
	RL: SPN (Synthetic preparation); PREP (Preparation)				
	(prepn. of, as imaging agent for diagnosis)				
RN	67-43-6 HCAPLUS				
CN	Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]- (7CI, 8CI, 9CI) (CA INDEX NAME)				



RN 60239-18-1 HCAPLUS

CN 1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraacetic acid (9CI) (CA INDEX NAME)



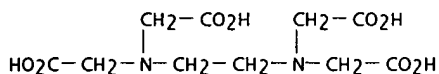


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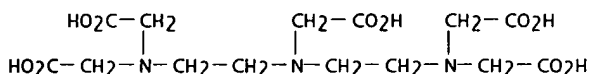
L61 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 IC ICM A61K049-00  
 ICS A61K049-04  
 CC 33-7 (Carbohydrates)  
 Section cross-reference(s): 8  
 ST metal bifunctional ligand; galactosamino oligosaccharide  
 polyaminopolycarboxylate metal; imaging metal bifunctional ligand  
 diagnosis  
 IT Imaging  
 (NMR, agents, galactosamino oligosaccharides and  
 polyaminopolycarboxylic acid metal complexes, for diagnosis)  
 IT Diagnosis  
 (agents, imaging, galactosamino oligosaccharides-  
 polyaminopolycarboxylic acid metal complexes)  
 IT Radiography  
 (contrast agents, galactosamino oligosaccharides and  
 polyaminopolycarboxylic acid metal complexes, for diagnosis)  
 IT 7429-91-6, Dysprosium, biological studies 7439-88-5, Iridium, biological  
 studies 7439-89-6, Iron, biological studies 7440-15-5, Rhenium  
 , biological studies 7440-19-9, Samarium, biological studies  
 7440-24-6, Strontium, biological studies 7440-26-8, Technetium  
 , biological studies 7440-27-9, Terbium, biological studies 7440-48-4,  
 Cobalt, biological studies 7440-50-8, Copper, biological studies  
 7440-52-0, Erbium, biological studies 7440-55-3, Gallium, biological  
 studies 7440-56-4, Germanium, biological studies 7440-60-0, Holmium,  
 biological studies 7440-64-4, Ytterbium, biological studies 7440-65-5,  
 Yttrium, biological studies  
 RL: BIOL (Biological study)  
 (imaging agent contg., for NMR diagnosis)  
 IT 67-43-6DP, Diethylenetriamine pentaacetic acid, reaction products  
 with galactosamino-oligosaccharides, metal complexes 7440-54-2DP,  
 Gadolinium, reaction products with galactosamino-oligosaccharides and  
 polyaminopolycarboxylic acid 7440-69-9DP, Bismuth, reaction products  
 with galactosamino-oligosaccharides and polyaminopolycarboxylic acid  
 7440-74-6DP, Indium, reaction products with galactosamino-oligosaccharides  
 and polyaminopolycarboxylic acid 41708-95-6DP, reaction products with  
 polyaminopolycarboxylic acid, metal complexes 60239-18-1DP,  
 1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraacetic acid, reaction  
 products with galactosamino-oligosaccharides, metal complexes  
 121806-83-5DP, 1-(p-Isothiocyanate benzyl)diethylenetriamine pentaacetic  
 acid, reaction products with galactosamino-oligosaccharides, metal  
 complexes 128174-30-1DP, reaction products with polyaminopolycarboxylic  
 acid, metal complexes 128174-32-3DP, reaction products with  
 polyaminopolycarboxylic acid, metal complexes  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of, as imaging agent for diagnosis)

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L61 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1990:643568 HCAPLUS  
 DN 113:243568  
 TI Preparation and spectroscopic properties of europium(III) polynuclear  
 complexonates with divalent metals  
 AU Karasev, V. E.; Loginov, A. A.  
 CS Inst. Khim., Vladivostok, USSR  
 SO Koord. Khim. (1990), 16(8), 1136-40  
 CODEN: KOKHDC; ISSN: 0132-344X  
 DT Journal  
 LA Russian  
 AB Eu<sub>2</sub>[ML]<sub>3</sub>.nH<sub>2</sub>O (M = Mg, Ca, Ba, Sr, Cu, Mn, Zn, Cd, Co; H<sub>4</sub>L =  
 EDTA) and EuM<sub>1</sub>L<sub>1</sub>.nH<sub>2</sub>O (M<sub>1</sub> = Ca, Cu; H<sub>5</sub>L<sub>1</sub> = diethylenetriaminepentaacetic  
 acid) were prepd. from Eu<sub>2</sub>O<sub>3</sub>, MCO<sub>3</sub> and H<sub>4</sub>L or H<sub>5</sub>L<sub>1</sub>. These complexes were  
 characterized by x-ray phase anal., TGA, IR and luminescence spectroscopy.  
 The coordination of the complexons to 2 different metals affects the  
 specifics of the migration of photoexcitation energy between the metals.  
 The Cu and Co ions effectively quench the luminescence which is caused by  
 the arrangement of the energy levels of the ions.  
 IT 60-00-4DP, EDTA, europium complexes with transition metals or alk.  
 earth metals 67-43-6DP, Diethylenetriamine pentaacetic acid,  
 cobalt-europium or copper-europium complexes  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and luminescence of)  
 RN 60-00-4 HCAPLUS  
 CN Glycine, N,N'-1,2-ethanediyibis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)

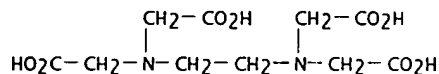


RN 67-43-6 HCAPLUS  
 CN Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]- (7CI, 8CI, 9CI) (CA  
 INDEX NAME)



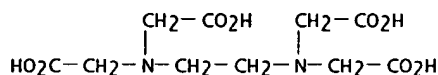
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L61 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1990:433966 HCAPLUS  
 DN 113:33966  
 TI Kinetic and spectrophotometric determination of trace zinc(II) in the presence of a large amount of lead(II) using ligand-substitution reactions of their metalloporphyrins with EDTA  
 AU Tabata, Masaaki; Kajihara, Naoko  
 CS Fac. Sci. Eng., Saga Univ., Saga, 840, Japan  
 SO Anal. Sci. (1989), 5(6), 719-24  
 CODEN: ANSCEN; ISSN: 0910-6340  
 DT Journal  
 LA English  
 AB The formation const. of the lead(II) complex of 5,10,15,20-tetrakis(4-sulfonatophenyl)porphine (H2TPPS4) (log K) defined as  $Pb^{2+} + H_2TPPS_4 \rightleftharpoons Pb(II)(TPPS_4) + 2H^+$  is  $-9.97 \pm 0.02$ , which is 109 times smaller than that of Zn(II)(TPPS4). In addn., Pb(II)(TPPS4) was rapidly replaced with EDTA with a half-life 200 ms. Zn(II)(TPPS4) is stable and does not react with EDTA even after 2 h. The large difference in the equil. and kinetic behavior between Zn(II)- and Pb(II)(TPPS4) allows the detn. of zinc(II) at as low as  $10^{-7}$  mol dm<sup>-3</sup> in the presence of  $10^{-2}$  mol dm<sup>-3</sup> lead(II). The molar absorptivity of Zn(II)(TPPS4) is 4.66 times.  $10^5$  mol<sup>-1</sup> dm<sup>3</sup> cm<sup>-1</sup>. The method was applied to the detn. of zinc(II) in lead chems. (lead(II) nitrate, lead(II) acetate and lead metal) and in tap and waste waters by measurement of the absorbance at 421 nm. The optimum conditions of the ligand-buffer soln. contg. aminopolycarboxylates and lead(II) are described to remove the interference of copper(II), cobalt(II) and manganese(II).  
 IT 60-00-4, EDTA, analysis  
 RL: PRP (Properties)  
 (kinetics of substitution reaction of, with lead and zinc sulfonatoporphine complexes)  
 RN 60-00-4 HCAPLUS  
 CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)

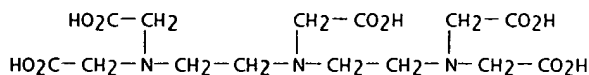


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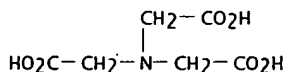
L61 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1983:221787 HCAPLUS  
 DN 98:221787  
 TI Comparison of complexes with  $^{99m}\text{Tc}$  and  $^{99}\text{Tc}$  using paper chromatography  
 AU Blaeuenstein, P.; Girgenrath, K.; Gasche, W.  
 CS Swiss Fed. Inst. React. Res., Wuerenlingen, CH-5303, Switz.  
 SO Anal. Chem. Symp. Ser. (1983), 13(Chromatogr. Biochem., Med. Environ. Res. 1), 199-201  
 CODEN: ACSSDR; ISSN: 0167-6350  
 DT Journal  
 LA English  
 AB The rate of complex formation of  $^{99}\text{Tc}$  and  $^{99m}\text{Tc}$  was studied by paper chromatog. using MeCN-H<sub>2</sub>O (2.5:1) as elution agent. Both isomers form the same products, but  $^{99m}\text{Tc}$  produces a significant acceleration of the reaction. Changes in the reducing agent influences the redn. rate but not the product formed. The redn. rate increased in the order  $\text{HSO}_3^- < \text{Sn} < \text{SnCl}_2$ . Investigation of com. DTPA-, EDTA-, and NTA-kits indicates slow complex formation but rapid redn. of  $^{99m}\text{TcO}_4^-$ . Although x-ray anal. of Tc-NTA complex was not completed, elemental anal. indicate the formula  $\text{K}_2[\text{Tc}_2\text{O}_2(\text{NTA})_2]$ .  
 IT 60-00-4D, technetium 99 and  $^{99m}$  complexes  
 67-43-6D, technetium 99 and  $^{99m}$  complexes  
 139-13-9D, technetium 99 and  $^{99m}$  complexes  
 RL: FORM (Formation, nonpreparative)  
 (formation of, rate of, paper chromatog. in study of)  
 RN 60-00-4 HCAPLUS  
 CN Glycine, N,N'-1,2-ethanediylobis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)



RN 67-43-6 HCAPLUS  
 CN Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 139-13-9 HCAPLUS  
 CN Glycine, N,N-bis(carboxymethyl)- (9CI) (CA INDEX NAME)



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L61 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2001 ACS

AN 1982:412562 HCAPLUS

DN 97:12562

TI Fibrous activated carbon loaded with metal-aminopolycarboxylic acid chelate as an ozone decomposition catalyst

PA Toho Beslon Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

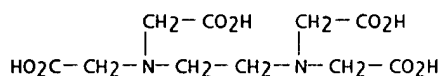
CODEN: JKXXAF

DT Patent

LA Japanese

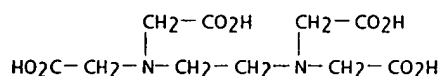
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57059635	A2	19820410	JP 1980-135253	19800930
AB	Fibrous activated C of sp. surface area 300-2000 m <sup>2</sup> /g, C <sub>6</sub> H <sub>6</sub> adsorption rate const. .gtoreq.0.2/min, strength .gtoreq.15 kg/mm <sup>2</sup> , and diam. 3-25 .mu. is loaded with 0.01-20% metal aminopolycarboxylate, the metal being Cu, Ag, Zn, Cd, Cr, Mn, Co, Ni, Pd, or Fe. Thus, 90:10 acrylonitrile-Me acrylate fiber was made flame-resistant in air at 230-50.degree. for 6 h with strain to give 20% shrinkage and activated at 900.degree. for 10 h in steam. The activated C(1200 m <sup>2</sup> /g. 0.6/min, 25 kg/mm <sup>2</sup> , and 5 .mu., resp.) was soaked in 100 vols. of 0.8% aq. Cu-EDTA for 30 min, dried at 100.degree. for 1 h to be loaded with 2% Cu-EDTA, and a 0.05 g portion was filled in a 35 mm glass tube in 0.03 g/mL filling d. when air contg. 2 ppm O <sub>3</sub> was passed over at 0.023 m <sup>3</sup> /min, O <sub>3</sub> decompn. was 100 % after 50.				
IT	60-00-4D, copper complexes RL: CAT (Catalyst use); USES (Uses) (catalysts, on active carbon fibers for ozone decompn.)				
RN	60-00-4 HCAPLUS				
CN	Glycine, N,N'-1,2-ethanediybis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)				

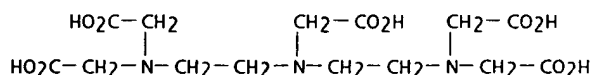


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L61 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1982:82004 HCAPLUS  
 DN 96:82004  
 TI Technetium-99m complexes of EDTA analogs: studies of the radiochemistry and biodistribution  
 AU Baker, Richmond J.; Diamanti, Carol I.; Goodwin, David A.; Meares, Claude F.  
 CS VA Hosp., Palo Alto, CA, USA  
 SO Int. J. Nucl. Med. Biol. (1981), 8(2-3), 159-69  
 CODEN: IJNMCI; ISSN: 0047-0740  
 DT Journal  
 LA English  
 AB The prepn. of 99mTc aminopolycarboxylate complexes was carried out under anaerobic conditions using Sn ions as the reducing agent. Electrophoresis and TLC were used for anal., showing that DTPA, EDTA, and 1-methyl-EDTA prepn. contained most of the 99mTc radioactivity in the chelate form. Kinetics studies showed that binding to 1-phenyl-EDTA was slow. All compds. migrated towards the anode on electrophoresis, enabling sepn. from free TcO<sub>4</sub><sup>-</sup> and reduced 99mTc. Quant. distribution studies in mice and computerized renograms in rabbits showed that renal clearance was the main excretory route, but all compds. were cleared more slowly than [<sup>131</sup>I]hippuran. The presence of the lipophilic Ph group in the EDTA mol. produced excretion partially by the biliary route. These complexes belong to a series of bifunctional chelates which has the potential to produce new 99mTc-radiopharmaceuticals having the in vivo stability of 99mTc-EDTA.  
 IT 60-00-4DP, technetium-99m complexes 67-43-6DP, technetium-99m complexes  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. and radiochem. and metab. of, scintigraphy in relation to)  
 RN 60-00-4 HCAPLUS  
 CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)



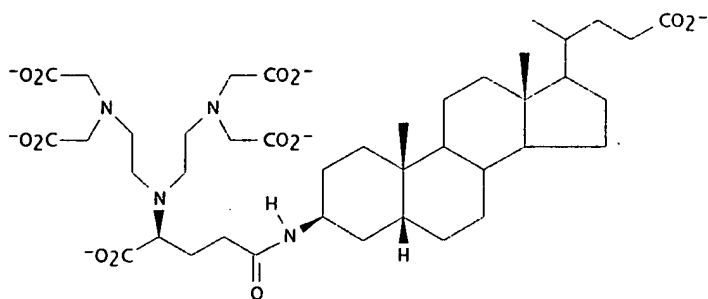
RN 67-43-6 HCAPLUS  
 CN Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]- (7CI, 8CI, 9CI) (CA INDEX NAME)



=&gt; d bib abs hitstr 174 1

174 ANSWER 174 OF 19 HCAPLUS /COPYRIGHT 2001 ACS  
 AN 2000:456934 HCAPLUS  
 DN 133:98665  
 TI Preparation of metal complexes of polyaminopolycarboxylate  
 linked bile acid derivatives as blood pool agents for nuclear magnetic  
 resonance diagnostics  
 IN Anelli, Pier Lucio; Brocchetta, Marino; De Haen, Christoph; Gazzotti,  
 Ornella; Lattuada, Luciano; Lux, Giovanna; Manfredi, Giuseppe; Morosini,  
 Pierfrancesco; Palano, Daniela; Serletti, Michele; Uggeri, Fulvio;  
 Visigalli, Massimo  
 PA Bracco International B.V., Neth.; et al.  
 SO PCT Int. Appl., 123 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000038738	A1	20000706	WO 1999-EP10002	19991216
	W:				
	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,				
	CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,				
	IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,				
	MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,				
	SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,				
	AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,				
	DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,				
	CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRAI	IT 1998-MI2802		19981223		
OS	MARPAT 133:98665				
GI					



I

AB The prepn., use and diagnostic compns. are described for complexes of X-L-Y (I) with paramagnetic bi-trivalent metal ions selected from the group consisting of Fe(2+), Fe(3+), Cu(2+), Cr(3+), Gd(3+), Eu(3+), Dy(3+), Yb(3+) or Mn(2+), as well as the salts thereof with physiol. compatible org. bases selected from primary, secondary, tertiary amines or basic amino acids, or with inorg. bases whose cations are sodium, potassium, magnesium, calcium or mixts. thereof. In X-L-Y, X is the residue of a polyaminopolycarboxylic ligand and the derivs. thereof, selected from the group consisting of: EDTA, DTPA, DOTA, DO3A, BOPTA; Y is the deriv. of a bile acid selected from the group consisting of residues of cholic, chenodeoxycholic, deoxycholic, ursodeoxycholic, lithocholic acids, both as they are and functionalized at the positions having the hydroxy group as the reactive group; L is a chain linked at any position of X and the C-3, C-7, C-12 positions of Y. The complexes may be used for the imaging of the blood system of the human and animal body, by NMR. Thus, [GdL](Q)3 (L = II, Q = methylglucammonium) was prepd. and its applicability for use as an MRI imaging agent demonstrated by measuring the relaxation rate of rabbit blood.

IT 280765-69-7P 280765-70-0P

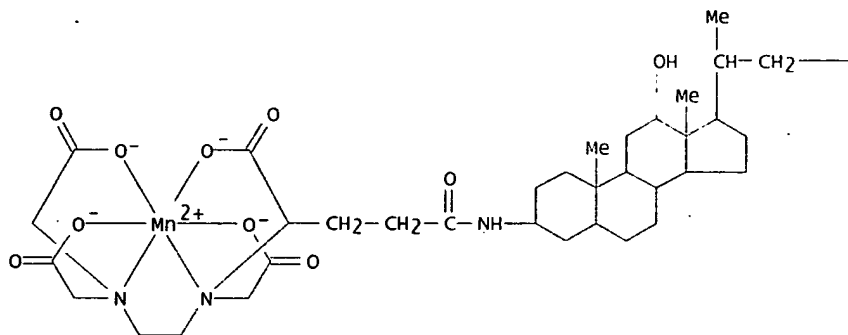
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of metal complexes of polyaminopolycarboxylate linked

SEARCHED BY SUSAN HANLEY 305-4053

bile acid derivs. as blood pool agents for NMR diagnostics)  
 RN 280765-69-7 HCAPLUS  
 CN Manganate(3-), [(3.beta.,5.beta.,12.alpha.)-3-[[[(4S)-4-[[2-[bis[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl][(carboxy-.kappa.O)methyl]amino-.kappa.N]-4-(carboxy-.kappa.O)-1-oxobutyl]amino]-12-hydroxycholelan-24-oato(5-)]-, trisodium (9CI) (CA INDEX NAME)

PAGE 1-A

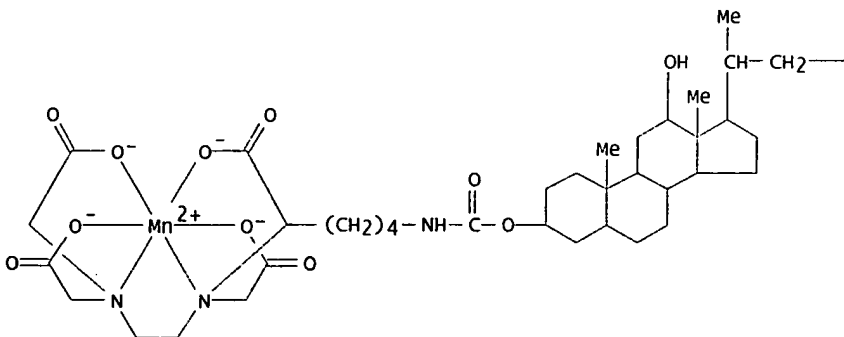
● 3 Na<sup>+</sup>

PAGE 1-B

—CH<sub>2</sub>—CO<sub>2</sub><sup>-</sup>

RN 280765-70-0 HCAPLUS  
 CN Manganate(3-), [(3.alpha.,5.beta.,12.alpha.)-3-[[[(5S)-5-[[2-[bis[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl][(carboxy-.kappa.O)methyl]amino-.kappa.N]-5-(carboxy-.kappa.O)pentyl]amino]carbonyl]oxy]-12-hydroxycholelan-24-oato(5-)]-, trisodium (9CI) (CA INDEX NAME)

PAGE 1-A

● 3 Na<sup>+</sup>



—CH<sub>2</sub>—CO<sub>2</sub><sup>-</sup>

RE.CNT 5

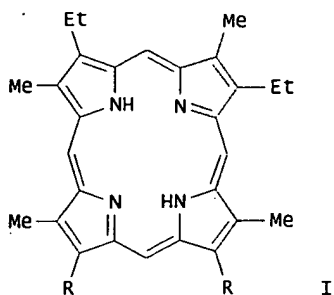
RE

- (1) Abbott Lab; EP 0279307 A 1988 HCAPLUS
- (2) Betebenner, D; Bioconjugate Chem 1991, V2(2), P117 HCAPLUS
- (3) Hoechst AG; EP 0417725 A 1991 HCAPLUS
- (4) Lucio, A; WO 9532741 A 1995 HCAPLUS
- (5) Peter, M; WO 9519186 A 1995 HCAPLUS

=&gt; d bib abs hitstr 174 2

L74 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2001 ACS  
 AN 2000:210175 HCAPLUS  
 DN 132:245443  
 TI Method for preparing metalloporphyrin-metal complex conjugates  
 IN Platzek, Johannes; Niedballa, Ulrich  
 PA Schering Aktiengesellschaft, Germany  
 SO PCT Int. Appl., 27 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000017205	A2	20000330	WO 1999-EP6075	19990820
	WO 2000017205	A3	20000713		
	W:	AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CN, CR, CU, CZ, DM, EE, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW,			
	RW:	AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE			
	DE 19845782	C1	20000413	DE 1998-19845782	19980922
	AU 9956230	A1	20000410	AU 1999-56230	19990820
	US 6194566	B1	20010227	US 1999-400993	19990921
PRAI	DE 1998-19845782		19980922		
	US 1997-67366		19971202		
	WO 1999-EP6075		19990820		
OS	MARPAT 132:245443				
GI					

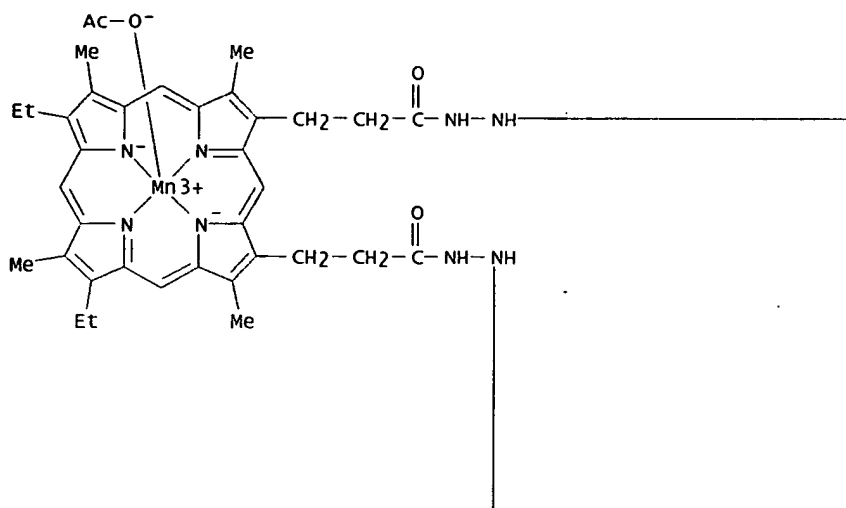


AB The invention relates to a method for prepg. metalloporphyrin-metal complex conjugates, contg. at least one ion of an element with an at. no. 20-32, 37-39, 42-51 or 57-83 in the complex fraction of the conjugate. For example,  $\text{Na}_2[\text{CuGd}_2\text{L}]$  [ $\text{H}_{10}\text{L} = \text{I}$ ;  $\text{R} = \text{CH}_2\text{CH}_2\text{CONHNHCOCH}_2\text{N}(\text{CH}_2\text{CH}_2\text{N}(\text{CH}_2\text{CO}_2\text{H})_2)\text{CH}_2\text{CH}_2\text{N}(\text{CH}_2\text{CO}_2\text{H})_2$ ] was prepd. in 97 % yield by the reaction of  $\text{Na}_2\text{Gd}_2(\text{H}_2\text{L})$  in HOAc with  $\text{Cu}(\text{acac})_2$  under N with heating at 120.degree. for 6 h.

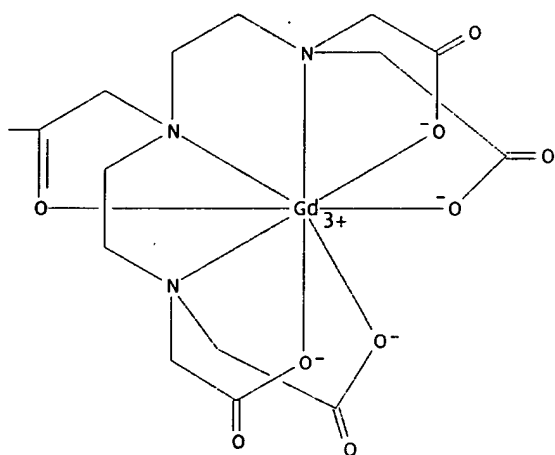
IT 256635-56-0P 256635-57-1P 261721-54-4P  
 261721-85-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

RN 256635-56-0 HCAPLUS  
 CN Gadolate(2-), [(acetato-.kappa.O)manganate][.mu.3-[[[(7,12-diethyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropionic acid-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24) bis[2-[[bis[2-[bis[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl]amino-.kappa.N]acetyl-.kappa.O]hydrazidato]](10-)]di-, disodium (9CI) (CA INDEX NAME)

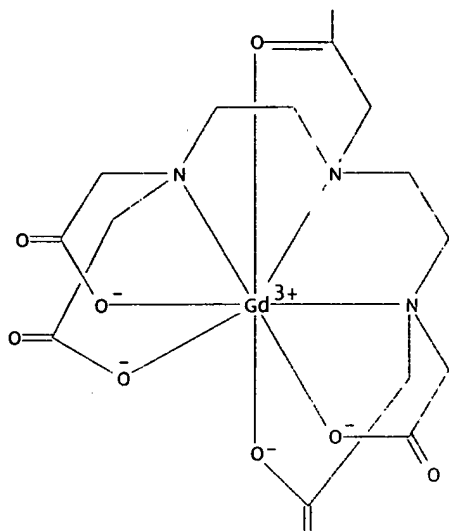
PAGE 1-A



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PAGE 2-A

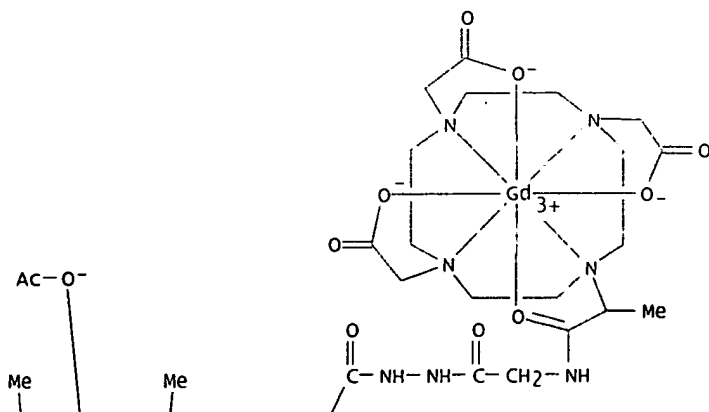


PAGE 3-A

● 2 Na<sup>+</sup>

RN 256635-57-1 HCAPLUS  
 CN Gadolinium, [(acetato-.kappa.O)manganese][.mu.3-[[10,10'-(7,12-diethyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl)bis[(1-oxo-3,1-propanediyl)hydrazo(2-oxo-2,1-ethanediyl)imino[1-methyl-2-(oxo-.kappa.O)-2,1-ethanediyl]]]bis[1,4,7,10-tetraazacyclododecane-1,4,7-triacetato-.kappa.N1,.kappa.N4,.kappa.N7,.kappa.N10,.kappa.O1,.kappa.O4,.kappa.O7]](8-)]di- (9Cl) (CA INDEX NAME)

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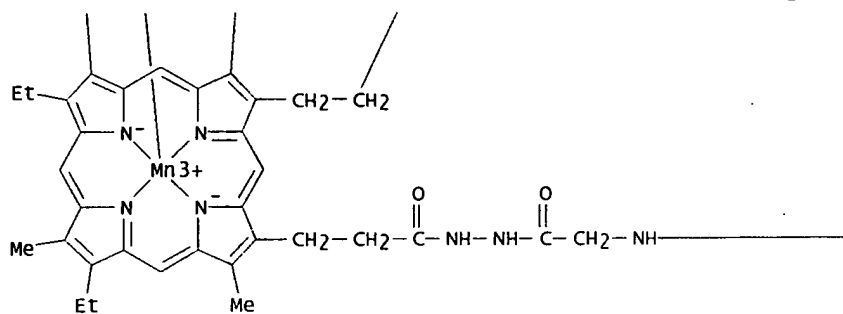
SEARCHED BY SUSAN HANLEY 305-4053

Page 6

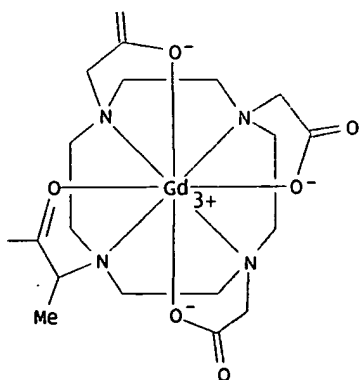
PAGE 1-B



PAGE 2-A



PAGE 2-B



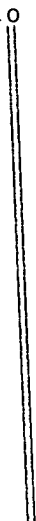
RN 261721-54-4 HCAPLUS  
 CN Gadolate(2-), [(acetato-.kappa.O)manganate][.mu.3-[[7,12-diethyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoic

SEARCHED BY SUSAN HANLEY 305-4053

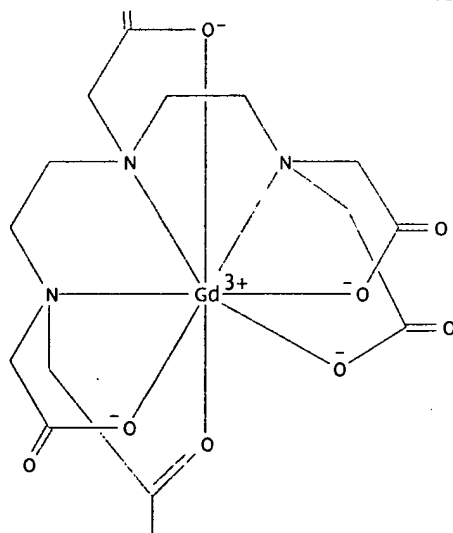
CEPERLEY 09/576,960

acid-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24) bis[2-[[[2-[[2-  
[bis[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl][(carboxy-  
.kappa.O)methyl]amino-.kappa.N]ethyl][(carboxy-.kappa.O)methyl]amino-  
.kappa.N]acetyl-.kappa.O]hydrazidato]](10-))]di-, disodium (9CI) (CA  
INDEX NAME)

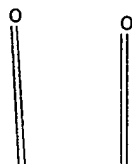
PAGE 1-A



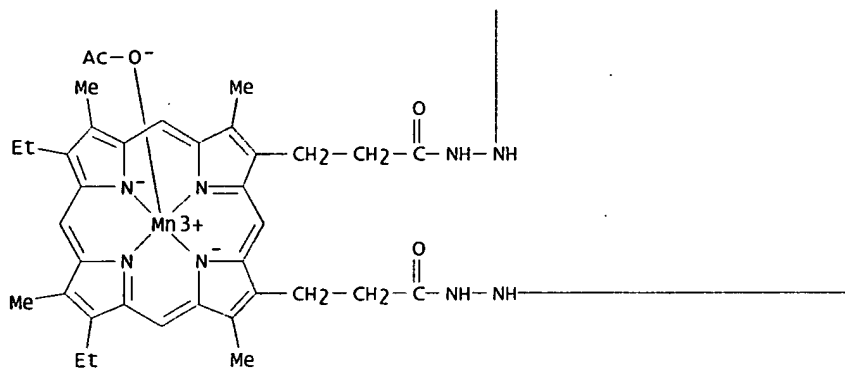
PAGE 2-A



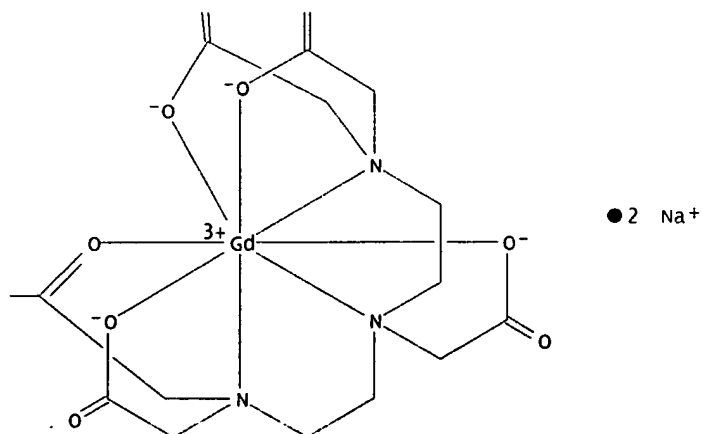
PAGE 2-B



PAGE 3-A



PAGE 3-B

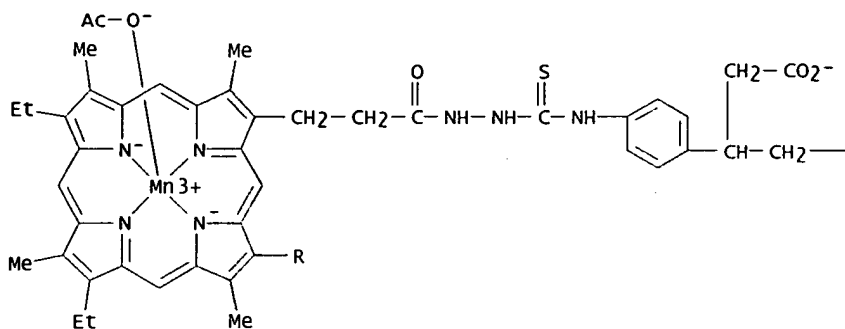


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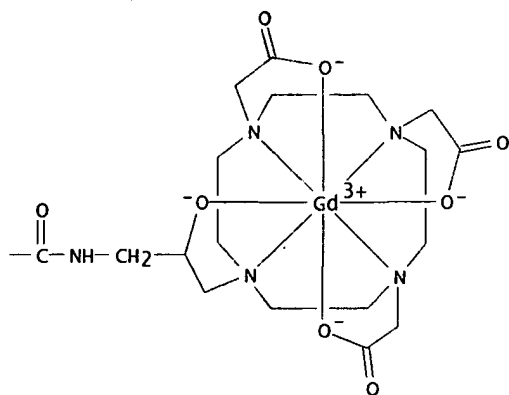
SEARCHED BY SUSAN HANLEY 305-4053

CN Gadolinate(4-), [(acetato-.kappa.O)manganate][.mu.3-[[10,10'-[(7,12-diethyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24)bis[(1-oxo-3,1-propanediyl)hydrazo(thioxomethylene)imino-4,1-phenylene[3-(carboxymethyl)-1-oxo-3,1-propanediyl]imino[2-(hydroxy-.kappa.O)-3,1-propanediyl]]]bis[1,4,7,10-tetraazacyclododecane-1,4,7-triacetato-.kappa.N1,.kappa.N4,.kappa.N7,.kappa.N10,.kappa.O1,.kappa.O4,.kappa.O7]](12-)]di-, disodium dihydrogen (9CI) (CA INDEX NAME)

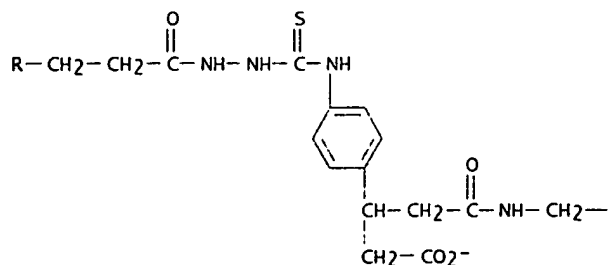
PAGE 1-A



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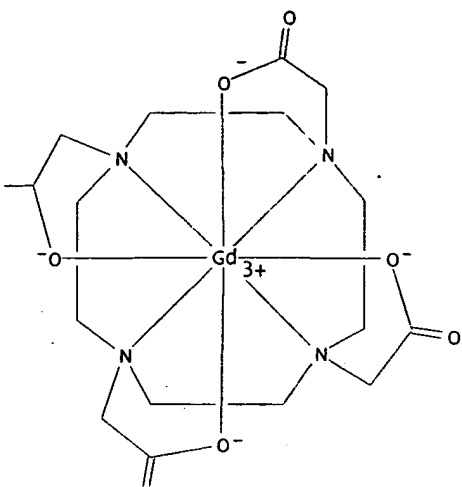


PAGE 2-A





PAGE 2-B



PAGE 3-A

● 2 H<sup>+</sup>

● 2 Na<sup>+</sup>

PAGE 3-B

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=&gt; d bib abs hitstr 174 3

L74 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2001 ACS

AN 1997:579696 HCAPLUS

DN 127:228839

TI Pharmaceutical agents containing perfluoroalkyl-containing metal complexes and the use thereof in tumor therapy and interventional radiology

IN Platzek, Johannes; Niedballa, Ulrich; Raduchel, Bernd; Schlecker, Wolfgang; Weinmann, Hanns-Joachim; Frenzel, Thomas

PA Schering A.-G., Germany

SO PCT Int. Appl., 144 pp.

CODEN: PIXXD2

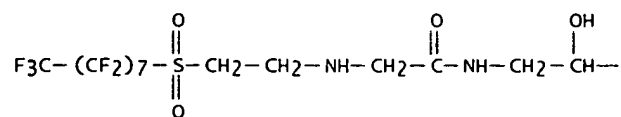
DT Patent

LA German

FAN. CNT 1

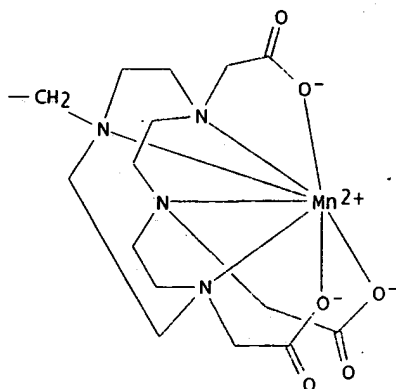
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9730969	A1	19970828	WO 1997-EP684	19970214
	W: AL, AM, AU, AZ, BB, BG, BR, BY, CA, CN, CZ, EE, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	DE 19608278	A1	19970828	DE 1996-19608278	19960223
	CA 2247253	AA	19970828	CA 1997-2247253	19970214
	AU 9717692	A1	19970910	AU 1997-17692	19970214
	EP 882010	A1	19981209	EP 1997-903278	19970214
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2000504736	T2	20000418	JP 1997-529766	19970214
	US 6180113	B1	20010130	US 1997-801983	19970219
	NO 9803875	A	19981022	NO 1998-3875	19980821
PRAI	DE 1996-19608278		19960223		
	US 1996-12506		19960229		
	WO 1997-EP684		19970214		
OS	MARPAT 127:228839				
AB	The invention relates to pharmaceutical agents contg. perfluoro alkylated metal complexes RF-L-A and the use thereof in tumor therapy and interventional radiol., in which formula RF is a perfluorinated, straight-chain or branched C chain with the formula -CnF2nX (X = terminal F, Cl, Br, I or H atom and n = 4-30), L is a binding group, and A is a metal complex or the salts thereof of org. and/or inorg. bases or amino acids or amino acid amides. Thus Gd/Dy/Y/Mn complexes of tetraazacyclododecane having amide pendants with perfluoroalkyl groups or polyaminopolycarboxylic acids with pendants contg. perfluoroalkyl groups were prepd.				
IT	195046-83-4P				
	RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)				
	(prepn. and use as pharmaceutical agent in tumor therapy and interventional radiol.)				
RN	195046-83-4 HCAPLUS				
CN	Manganate(1-), [10-[3-[[[2-[(heptadecafluorooctyl)sulfonyl]ethyl]amino]acetyl]amino]-2-hydroxypropyl]-1,4,7,10-tetraazacyclododecane-1,4,7-triacetato(3-)-.kappa.N1,.kappa.N4,.kappa.N7,.kappa.N10,.kappa.O1,.kappa.O4,.kappa.O7]-, sodium (9Ci) (CA INDEX NAME)				

PAGE 1-A



● Na<sup>+</sup>

PAGE 1-B



=&gt; d bib abs hitstr 174 4

L74 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2001 ACS

AN 1997:39202 HCAPLUS

DN 126:90883

TI In situ electrochemically mediated oxygen delignification of wood pulp with a manganese(III) aminopolycarboxylate complex

AU Gyenge, Elod L.; Oloman, Colin W.

CS Dep. Chem. Eng., Univ. British Columbia, Vancouver, BC, V6T 1Z4, Can.

SO Tappi J. (1997), 80(1), 194-202

CODEN: TAJODT; ISSN: 0734-1415

PB TAPPI Press

DT Journal

LA English

AB The Mn complex Mn(III)CyDTA [(trans-1,2-cyclohexane-1,2-diamine-N,N,N',N'-tetraaceto)manganate (III)] (I) was used as the redox catalyst for the in situ electrochem. mediated O bleaching of softwood kraft pulp. Three hour bleaching runs at 101 kPa O pressure, pH 9.0, 80.degree., 1.4 mM Mn, with 1 L of pulp suspension at 1% consistency gave the following results: in the presence of an initial concn. of 1.4 mM I employing a graphite plate anode (area = 58 cm<sup>2</sup>) with a c.d. of 102 A/m<sup>2</sup>, the kappa no. dropped from 30.0 to 15.0, while the viscosity decreased from 34.6 cP to 20.5 cP. Under similar conditions, the "blank" run, i.e., without I and current, brought about only a 9.4% decrease in kappa no., from 30.0 to 27.2, while the viscosity dropped slightly, from 34.6 cP to 30.3 cP. The effects of Mn concn., CyDTA/Mn molar ratio, O, temp., pH, and current on delignification and carbohydrate degrdn., were studied in parametric and factorial expts. The results showed that Mn(III) promotes delignification mainly through 2nd- and 3rd-order interaction with O and a temp., whereas CyDTA is working as a carbohydrate protecting agent. The anodic current continuously regenerates the Mn(III) to support the delignification process.

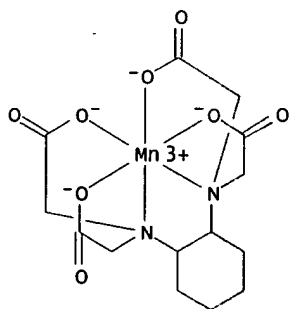
IT 73360-48-2

RL: CAT (Catalyst use); USES (Uses)

(in situ electrochem. mediated oxygen bleaching of pulp with manganese(III) aminopolycarboxylate complex catalysts)

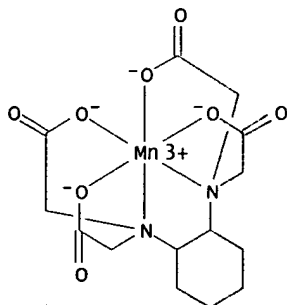
RN 73360-48-2 HCAPLUS

CN Manganate(1-), [[N,N'-(trans-1,2-cyclohexanediy)]bis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, (OC-6-21)- (9CI) (CA INDEX NAME)



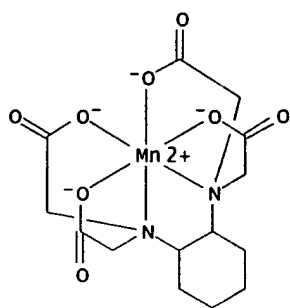
=&gt; d bib abs hitstr 174 5

L74 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1996:427571 HCAPLUS  
 DN 125:179781  
 TI Electrosynthesis of a manganese(III) aminopolycarboxylate complex in alkaline media  
 AU Gyenge, E. L.; Oloman, C. W.  
 CS Dep. Chem. Eng., Univ. British Columbia, Vancouver, V6T 1Z4, Can.  
 SO J. Appl. Electrochem. (1996), 26(7), 721-732  
 CODEN: JAELEJ; ISSN: 0021-891X  
 DT Journal  
 LA English  
 AB Mn(III)CyDTA [(trans-cyclohexane-1,2-diamine-N,N',N'-tetraacetato)manganate(III)] was generated electrochem. from Mn(II)CyDTA (6-54 mM) in 0.1M NaHCO<sub>3</sub> at pH 9.0 and 10.5, resp., 25.degree., for two CyDTA/Mn molar ratios (1/1 and 2/1). A divided batch electrochem. reactor was employed with anode current densities from 2.6 to 102 A m<sup>-2</sup>. Sep. cyclic voltammetry expts. of Mn(III)CyDTA in alk. media showed a prepeak behavior, indicating the adsorption of Mn(II) species. The visible anodic deposit, formed during the electrosynthesis of Mn(III)CyDTA at pH 10.5 and 1/1 CyDTA/Mn molar ratio on stainless steel and PbO<sub>2</sub>/Pb, reduces the current efficiency for Mn(III). For a Mn(II) concn. of 18 mM and at 13 A m<sup>-2</sup>, the graphite and platinized titanium anodes gave a current efficiency for Mn(III) of 78% and 66%, resp., without a visible deposit. A 2/1 CyDTA/Mn molar ratio, avoided a visible anodic deposit formation, but gave lower current efficiencies for Mn(III) than in the case of a 1/1 ligand to metal ratio. The electrosynthesis of Mn(III)CyDTA is recommended for routine prepn. of the complex and is also suitable for in situ electrochem. mediated oxidns. in alk. media (up to pH 11).  
 IT 73360-48-2P, (trans-Cyclohexane-1,2-diamine-N,N',N'-tetraacetato)manganate(1-)  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (electrochem. oxidative prepn. in alk. soln.)  
 RN 73360-48-2 HCAPLUS  
 CN Manganate(1-), [[N,N'-(trans-1,2-cyclohexanediyl)bis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, (OC-6-21)- (9CI) (CA INDEX NAME)



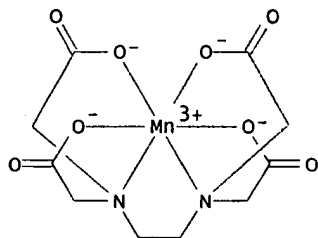
IT 14650-07-8  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process) (electrochem. oxidn. and adsorption by electrodes)  
 RN 14650-07-8 HCAPLUS  
 CN Manganate(2-), [[re1-N,N'-(1R,2R)-1,2-cyclohexanediylbis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, (OC-6-21)- (9CI) (CA INDEX NAME)

CEPERLEY 09/576,960

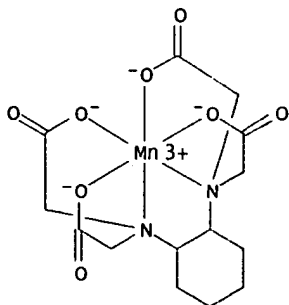


=&gt; d bib abs hitstr 174 6

L74 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1995:286499 HCAPLUS  
 DN 122:94975  
 TI Oxidation reactions of Mononuclear Manganese(III) Complexes  
 AU Gangopadhyay, Sumana; Ali, Mahammad; Banerjee, Pradyot  
 CS Department of Inorganic Chemistry, Indian Association for the Cultivation  
 of Science, Calcutta, 700 032, India  
 SO Coord. Chem. Rev. (1994), 135(1-2), 399-427  
 CODEN: CCHRAM; ISSN: 0010-8545  
 DT Journal; General Review  
 LA English  
 AB A review, with 73 refs., is given on the oxidn. reactions of various  
 Mn(III) coordinated mols. The reactions are categorized primarily  
 with respect to the type of Mn(III) complexes. Emphasis is  
 given to the reactivity of the Mn(III) complexes derived from  
 aminopolycarboxylic acids, acetylacetone, porphyrins, bipyridine, and  
 pyrophosphoric acid with various org., inorg., and biochem. electron  
 donors. Kinetic and mechanistic features assocd. with the interactions  
 are highlighted and analyzed critically. The utility and scope of the  
 catalytic oxidn. of hydrocarbons and secondary amines by Mn(III)  
 porphyrins are discussed at length.  
 IT 11133-34-9, (Ethylenediaminetetraacetato)manganate(1-)  
 73360-48-2, (trans-1,2-Cyclohexanediamine-N,N,N',N'-  
 tetraacetato)manganate(1-)  
 RL: RCT (Reactant)  
 (oxidn. reactions of)  
 RN 11133-34-9 HCAPLUS  
 CN Manganate(1-), [[N,N'-(trans-1,2-ethanediyl)bis[N-[(carboxy-  
 .kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, (OC-6-21)- (9CI) (CA  
 INDEX NAME)



RN 73360-48-2 HCAPLUS  
 CN Manganate(1-), [[N,N'-(trans-1,2-cyclohexanediyl)bis[N-[(carboxy-  
 .kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, (OC-6-21)- (9CI) (CA  
 INDEX NAME)



=&gt; d bib abs hitstr 174 7

L74 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2001 ACS

AN 1992:58757 HCAPLUS

DN 116:58757

TI Preparation of biological aminopolycarboxylic acid chelating agents

IN Rongved, Paal; Klaveness, Jo; Dugstad, Harald

PA Cockbain, Julian Roderick Michaelson, UK; Nycomed A/S

SO PCT Int. Appl., 43 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9115467	A1	19911017	WO 1991-EP675	19910409
	W: AU, CA, FI, JP, NO, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
	AU 9176642	A1	19911030	AU 1991-76642	19910409
PRAI	GB 1990-7967		19900409		
	WO 1991-EP675		19910409		

OS MARPAT 116:58757

AB Title compds. (XCHR1)2N(CHR1)nA(CHR1)mN(CHR1X)2 [A = XR1CHN:, (XR1CH)2N(R1CH)pN:, (R1CH)mA represents a C-N bond; X = HO2C or deriv. thereof, R1 = H, (substituted) alkoxy, (substituted) alkyl, R3R2NCO; R2 = H, (substituted) alkyl; R3 = (substituted) alkoxyalkyl, etc.; m, n, p = 2-4; with provisos], metal chelates and salts thereof, as therapeutic, diagnostic, and detoxification agent (no data) are prepd. 2-(Aminoethoxy)ethanol in AcNME3, was added to 1,5-bis(2,6-dioxomorpholino)-3-azapentane-3-acetic acid, the soln. stirred overnight and a soln. of ether/chloroform (1:1 ratio) added to give 6-(carboxymethyl)-3,9-bis(5-hydroxy-3-oxapentylcarbamoylmethyl)-3,6,9-triazaundecane diacid (I). I dissolved in H2O was added to Gd(III) oxide, and the mixt. refluxed overnight to give Gd I chelate. Formulations comprising the title chelates are given.

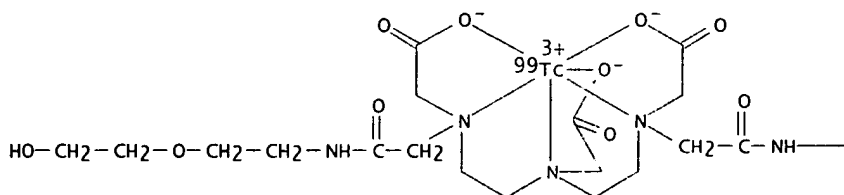
IT 138368-42-0P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, for diagnostic imaging, metal detoxication and radiotherapy)

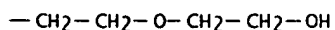
RN 138368-42-0 HCAPLUS

CN Technetium-99Tc, [9,12-bis(carboxymethyl)-1-hydroxy-15-[2-[[2-(2-hydroxyethoxy)ethyl]amino]-2-oxoethyl]-7-oxo-3-oxa-6,9,12,15-tetraazaheptadecan-17-oato(3-)-N9,N12,N15,O9,O12,O17]- (9CI) (CA INDEX NAME)

PAGE 1-A



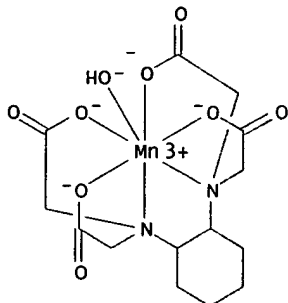
PAGE 1-B



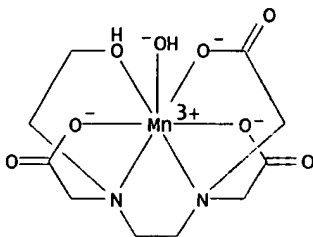


=&gt; d bib abs hitstr 174 8

L74 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1991:458098 HCAPLUS  
 DN 115:58098  
 TI Kinetics and mechanism of reaction between aminopolycarboxylatomanganate(III) complexes and cyanide ions: a reinvestigation of the MnCyDTA-CN- reaction [Erratum to document cited in CA114(16):50399e]  
 AU Mishra, Pratima K.; Prasad, Surendra; Nigam, Prem C.  
 CS Dep. Chem., Reg. Res. Lab., Bhubaneswar, 751005, India  
 SO Transition Met. Chem. (London) (1991), 16(2), 288  
 CODEN: TMCHDN; ISSN: 0340-4285  
 DT Journal  
 LA English  
 AB Changes in author addresses have been made. The errors were not reflected in the abstr. or the index entries.  
 IT 131611-96-6 131629-60-2  
 RL: RCT (Reactant)  
 (substitution reaction of, with cyanide, kinetics and mechanism of (Erratum))  
 RN 131611-96-6 HCAPLUS  
 CN Manganate(2-), [[N,N'-1,2-cyclohexanediyl]bis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']hydroxy- (9CI) (CA INDEX NAME)

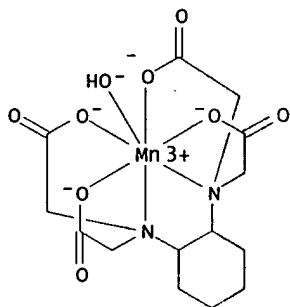


RN 131629-60-2 HCAPLUS  
 CN Manganate(1-), [N-[2-[bis(carboxymethyl)amino]ethyl]-N-(2-hydroxyethyl)glycinato(3-)]hydroxy- (9CI) (CA INDEX NAME)

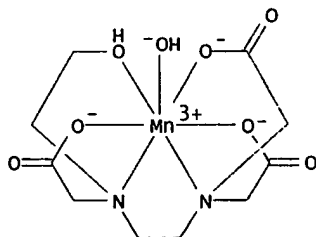


=&gt; d bib abs hitstr 174 9

L74 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1991:50399 HCAPLUS  
 DN 114:50399  
 TI Kinetics and mechanism of reaction between aminopolycarboxylatomanganate(III) complexes and cyanide ions: a reinvestigation of the MnCyDTA-CN- reaction  
 AU Mishra, Pratima K.; Prasad, Surendra; Nigam, Prem C.  
 CS Dep. Chem., Reg. Res. Lab., Bhubaneswar, 751005, India  
 SO Transition Met. Chem. (London) (1990), 15(6), 429-33  
 CODEN: TMCHDN; ISSN: 0340-4285  
 DT Journal  
 LA English  
 AB Reactions between CN- and complexes of MnIII with trans-1,2-diaminocyclohexanetetraacetic acid (CyDTA) and hydroxyethylethylenediaminetriacetic acid (HEEDTA) were studied spectrophotometrically at the  $\lambda_{\text{max}}$ s of their resp. hydroxo species under pseudo-I-order conditions. The forward reaction is 1st-order with respect to both the metal complex and [CN-]. The kinetics of the reverse reaction, i.e. the reaction between  $[\text{Mn}(\text{CN})_6]^{3-}$  and CyDTA4- or HEEDTA3- (taken in large excess) were followed spectrophotometrically. In both systems, the reactions follow 1st-order kinetics each in  $[\text{Mn}(\text{CN})_6]^{3-}$  and the resp. ligand concn. and an inverse 1st-order dependence in [CN-]. A 6 step mechanism is proposed for the forward reaction where the 5th step is the rate-detg. one. PH, ionic strength and temp. dependences were studied for both systems.  
 IT 131611-96-6 131629-60-2  
 RL: RCT (Reactant)  
 (substitution reaction of, with cyanide, kinetics and mechanism of)  
 RN 131611-96-6 HCAPLUS  
 CN Manganate(2-),  $[[\text{N},\text{N}'\text{-}1,2\text{-cyclohexanediy]bis}[\text{N}(\text{carboxymethyl})\text{glycinato}]](4\text{-})\text{-N},\text{N}',\text{O},\text{O}',\text{ON},\text{ON}']\text{hydroxy-}$  (9CI) (CA INDEX NAME)



RN 131629-60-2 HCAPLUS  
 CN Manganate(1-),  $[\text{N}-[2\text{-}[\text{bis}(\text{carboxymethyl})\text{amino}]\text{ethyl}]\text{-N-(2-hydroxyethyl)glycinato(3-)]\text{hydroxy-}$  (9CI) (CA INDEX NAME)



=&gt; d bib abs hitstr 174 10

L74 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2001 ACS

AN 1988:403477 HCAPLUS

DN 109:3477

TI Paramagnetic chelates for NMR imaging, their preparation, compositions containing them, and their use

IN Felder, Ernst; Fumagalli, Luciano; Uggeri, Fulvio; Vittadini, Giorgio

PA Bracco Industria Chimica S.p.A., Italy

SO Eur. Pat. Appl., 47 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 230893	A2	19870805	EP 1987-100274	19870112
	EP 230893	A3	19880601		
	EP 230893	B1	19900613		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	CA 1324150	A1	19931109	CA 1987-526867	19870107
	AT 53571	E	19900615	AT 1987-100274	19870112
	ES 2031832	T3	19930101	ES 1987-100274	19870112
	AU 8767539	A1	19870806	AU 1987-67539	19870113
	AU 591225	B2	19891130		
	JP 62195388	A2	19870828	JP 1987-18773	19870130
	JP 03064504	B4	19911007		
PRAI	IT 1986-19236		19860130		
	EP 1987-100274		19870112		

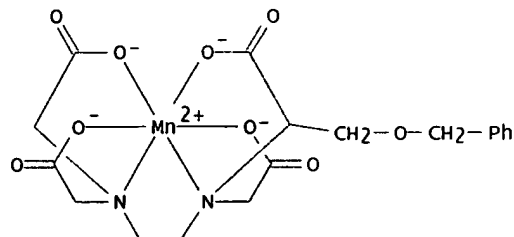
AB Paramagnetic chelates for nuclear spin tomog., [RO(CH<sub>2</sub>)mCH(CO<sub>2</sub>Z)N(R<sub>1</sub>)R<sub>2</sub>.Ma<sup>+</sup>]b-Eb<sup>+</sup> [I; R = H, (OH-substituted) C1-8 alkyl, C1-4 aliph. aralkyl, (un)substituted Ph, C3-150 and O1-50 (poly)oxa-alkyl; R<sub>1</sub> = CH<sub>2</sub>CO<sub>2</sub>Z, CH(Me)CO<sub>2</sub>Z, (CH<sub>2</sub>)<sub>2</sub>N(CH<sub>2</sub>CO<sub>2</sub>Z)<sub>2</sub>, OH aralkyl, OH pyridylalkyl, etc.; R<sub>2</sub> = R<sub>1</sub>, (CH<sub>2</sub>)<sub>n</sub>X(CH<sub>2</sub>)<sub>n</sub>N(R<sub>1</sub>)R<sub>3</sub>, CH(Me)CH(Me)N(R<sub>1</sub>)R<sub>3</sub>, C3-7 ring-N(R<sub>1</sub>)R<sub>3</sub>; R<sub>3</sub> = CH<sub>2</sub>CO<sub>2</sub>Z, CH(Me)CO<sub>2</sub>Z, RO(CH<sub>2</sub>)mCH(CO<sub>2</sub>Z); X = chem. bond, O, S, NH, N, CH<sub>2</sub>CO<sub>2</sub>Z, NCH(Me)CO<sub>2</sub>Z; Z = H, unit of neg. charge; m = 1-5, n = 2-3; b = 0-4; Ma<sup>+</sup> = Fe<sup>2+</sup>, Fe<sup>3+</sup>, Gd<sup>3+</sup>, Mn<sup>2+</sup>; Eb<sup>+</sup> = ion of alkali metal, alk. earth metal, (polyhydroxy)alkyl ammonium, alkanol ammonium, basic protonated amino acid], are prepd. by reacting polyaminopolycarboxylic acids, RO(CH<sub>2</sub>)mCH(CO<sub>2</sub>H)N(R<sub>1</sub>)R<sub>2</sub> (II), with salts, oxides, or hydroxides of Ma<sup>+</sup>. Imaging compns. and methods of use are also disclosed. II [R = PhCH<sub>2</sub>; m = 1, R<sub>2</sub> = (CH<sub>2</sub>)<sub>2</sub>N(R<sub>1</sub>)R<sub>3</sub>; R<sub>1</sub> = R<sub>3</sub> = CH<sub>2</sub>CO<sub>2</sub>H], prepd. by reacting 3-phenylmethoxy-2-chloropropionic acid with ethylenediamine and the resulting product with bromoacetic acid, was treated with N-methyl-D-glucamine and MnCl<sub>2</sub> to make the N-methylglucamine salt of the Mn complex. The LD<sub>50</sub> was 1177 mg/kg mouse given i.v. or 8329 mg/kg given orally.

IT 113662-20-7P 113662-21-8P 113773-98-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, for tomog.)

RN 113662-20-7 HCAPLUS

CN Manganate(2-), [N-[2-[bis(carboxymethyl)amino]ethyl]-N-(carboxymethyl)-O-(phenylmethyl)-L-serinato(4-)]-, dihydrogen (9CI) (CA INDEX NAME)

● 2 H<sup>+</sup>

RN 113662-21-8 HCAPLUS

CN Manganate(2-), [N-[2-[bis(carboxymethyl)amino]ethyl]-N-(carboxymethyl)-O-

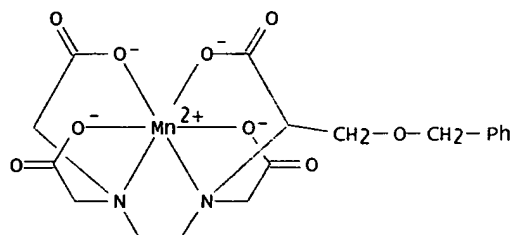
SEARCHED BY SUSAN HANLEY 305-4053

CEPERLEY 09/576,960

(phenylmethyl)-L-serinato(4-)]-, dihydrogen, compd. with  
2-amino-2-(hydroxymethyl)-1,3-propanediol (1:2) (9CI) (CA INDEX NAME)

CM 1

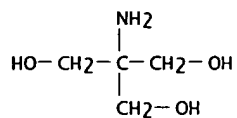
CRN 113662-20-7  
CMF C18 H20 Mn N2 O9 . 2 H  
CCI CCS  
CDES \*



● 2 H<sup>+</sup>

CM 2

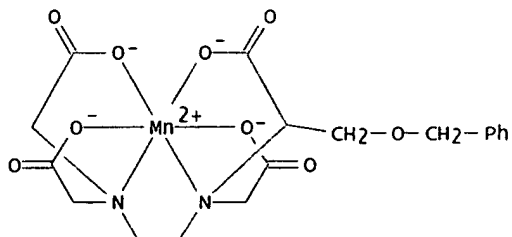
CRN 77-86-1  
CMF C4 H11 N O3



RN 113773-98-1 HCAPLUS  
CN D-Glucitol, 1-deoxy-1-(methylamino)-, [N-[2-[bis(carboxymethyl)amino]ethyl]-N-(carboxymethyl)-O-(phenylmethyl)-L-serinato(4-)]manganate(2-) (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 113662-20-7  
CMF C18 H20 Mn N2 O9 . 2 H  
CCI CCS  
CDES \*



● 2 H<sup>+</sup>

CM 2

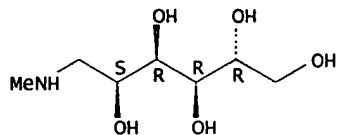
SEARCHED BY SUSAN HANLEY 305-4053

Page 22

CEPERLEY 09/576,960

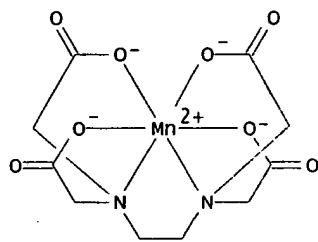
CRN 6284-40-8  
CMF C7 H17 N O5  
CDES \*

Absolute stereochemistry.

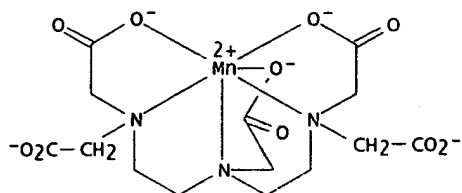


=&gt; d bib abs hitstr 174 11

L74 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1987:614200 HCAPLUS  
 DN 107:214200  
 TI Paramagnetic complexes of manganese(II), iron(III), and gadolinium(III) as contrast agents for magnetic resonance imaging. The influence of stability constants on the biodistribution of radioactive aminopolycarboxylate complexes  
 AU Fornasiero, Daniel; Bellen, Johan C.; Baker, Richmond J.; Chatterton, Barry E.  
 CS Dep. Nucl. Med., R. Adelaide Hosp., Adelaide, 5000, Australia  
 SO Invest. Radiol. (1987), 22(4), 322-7  
 CODEN: INVRAV; ISSN: 0020-9996  
 DT Journal  
 LA English  
 AB Paramagnetic complexes of Mn(II), Fe(III), and Gd(III) with many ligands appear to undergo ligand substitution in vivo, producing biodistribution data similar to the hydrated metal ions. To identify ligands likely to be valuable in the prepn. of paramagnetic contrast agents, a series of aminopolycarboxylate complexes with stability consts. increasing in the order iminodiacetic acid < nitrilotriacetic acid < EDTA < CDTA .ltoreq. DTPA was prepd. with <sup>54</sup>Mn(II), <sup>59</sup>Fe(III), and <sup>153</sup>Cd(III) at both tracer and carrier levels. Biodistribution studies in mice suggested that complexes remained unchanged in vivo if their stability consts. were .apprx.10<sup>16</sup> for Mn(II) and Gd(III) and >10<sup>22</sup> for Fe(III) complexes at tracer levels. Metal complexes with added carrier appeared to be effectively more stable in vivo, possible due to dissocn. and satn. of metal-binding sites. To avoid the accumulation of metal ions in tissues, new paramagnetic contrast agents contg. these metal ions will require stability consts. equal to or greater than those identified here.  
 IT 55448-20-9P 56731-38-5P 71184-38-8P  
 108917-52-8P 108917-53-9P 108935-88-2P  
 RL: BOC (Biological occurrence); SPN (Synthetic preparation); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)  
 (prepn. and biodistribution of, magnetic resonance imaging in relation to)  
 RN 55448-20-9 HCAPLUS  
 CN Manganate(2-), [[N,N'-1,2-ethanediy]bis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, dihydrogen, (OC-6-21)- (9CI) (CA INDEX NAME)

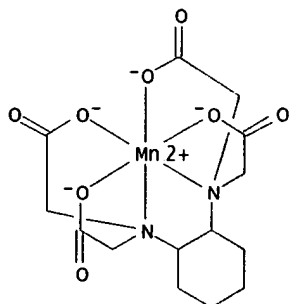
● 2 H<sup>+</sup>

RN 56731-38-5 HCAPLUS  
 CN Manganate(3-), [N,N-bis[2-[[[(carboxy-.kappa.O)methyl](carboxymethyl)amino-.kappa.N]ethyl]glycinato(5-)-.kappa.N,.kappa.O]-, trihydrogen (9CI) (CA INDEX NAME)



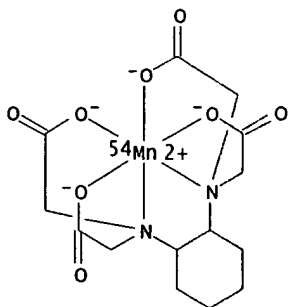
● 3 H<sup>+</sup>

RN 71184-38-8 HCAPLUS  
CN Manganate(2-), [[N,N'-1,2-cyclohexanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, dihydrogen, [OC-6-21-(trans)]- (9CI) (CA INDEX NAME)



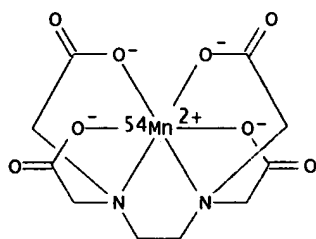
● 2 H<sup>+</sup>

RN 108917-52-8 HCAPLUS  
CN Manganate(2-)-54Mn, [[N,N'-1,2-cyclohexanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, dihydrogen, (OC-6-21)-(9CI) (CA INDEX NAME)



● 2 H<sup>+</sup>

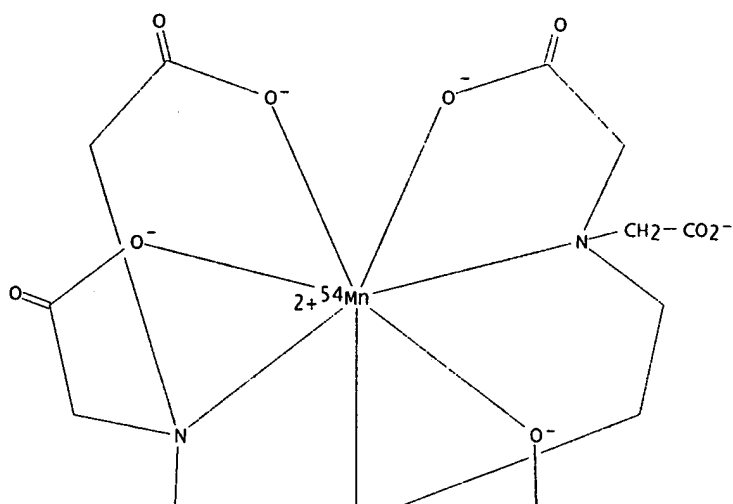
RN 108917-53-9 HCAPLUS  
CN Manganate(2-)-54Mn, [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, dihydrogen, (OC-6-21)-(9CI) (CA INDEX NAME)



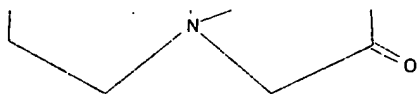
● 2 H<sup>+</sup>

RN 108935-88-2 HCAPLUS  
 CN Manganate(3-)-54Mn, [N,N-bis[2-[bis(carboxymethyl)amino]ethyl]glycinato(5-)]-, trihydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

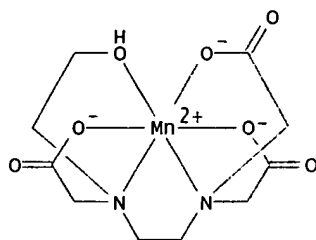


● 3 H<sup>+</sup>

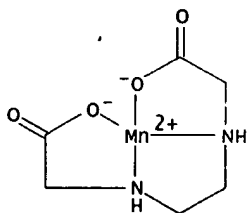


=&gt; d bib abs hitstr 174 12

L74 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1987:80802 HCAPLUS  
 DN 106:80802  
 TI Catalysis of superoxide dismutation by manganese  
 aminopolycarboxylate complexes  
 AU Koppenol, W. H.; Levine, F.; Hatmaker, T. L.; Epp, J.; Rush, J. D.  
 CS Dep. Chem., Univ. Maryland, Catonsville, MD, 21228, USA  
 SO Arch. Biochem. Biophys. (1986), 251(2), 594-9  
 CODEN: ABBIA4; ISSN: 0003-9861  
 DT Journal  
 LA English  
 AB Complexes of Mn, Cu, Co, and Fe with a variety of  
 aminopolycarboxylates at concns. from 2 .times. 10<sup>-7</sup> to 3 .times.  
 10<sup>-6</sup>M were tested for superoxide dismutase activity with horse  
 ferricytochrome c as the competing reagent for O<sub>2</sub><sup>-</sup>. In the presence of  
 excess ligand only manganous nitrilotriacetate and manganous  
 ethylenediaminediacetate showed activity with catalytic rate consts. of  
 2.2 .times. 10<sup>7</sup> and 1.8 .times. 10<sup>7</sup> M<sup>-1</sup>s<sup>-1</sup>, resp., at pH 6, 22.degree.,  
 and 10 mM ionic strength. These rate consts. decrease considerably at  
 higher pH. Manganous N-hydroxyethylethylenediaminetriacetate is oxidized  
 by O<sub>2</sub><sup>-</sup> but apparently does not have catalytic activity. From the exptl.  
 conditions under which the 2 complexes mentioned above exhibit catalysis,  
 and the inactivity of other metal chelates, it is concluded that an open  
 coordination site is essential but not sufficient to catalyze the  
 dismutation reaction.  
 IT 106143-92-4  
 RL: RCT (Reactant)  
 (oxidn. of, by superoxide)  
 RN 106143-92-4 HCAPLUS  
 CN Manganate(1-), [N-[2-[bis(carboxymethyl)amino]ethyl]-N-(2-  
 hydroxyethyl)glycinato(3-)]-, hydrogen (9CI) (CA INDEX NAME)

● H<sup>+</sup>

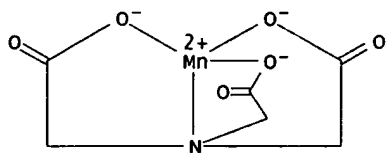
IT 29977-09-1 106143-93-5  
 RL: BIOL (Biological study)  
 (superoxide dismutation catalysis by)  
 RN 29977-09-1 HCAPLUS  
 CN Manganese, [[N,N'-1,2-ethanediylbis[glycinato]](2-)-N,N',O,O']- (9CI) (CA  
 INDEX NAME)



RN 106143-93-5 HCAPLUS  
 CN Manganate(1-), [N,N-bis(carboxymethyl)glycinato(3-)-N,O,O',O']-,

SEARCHED BY SUSAN HANLEY 305-4053

hydrogen, (T-4)- (9CI) (CA INDEX NAME)



● H<sup>+</sup>

=&gt; d bib abs hitstr 174 13

L74 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2001 ACS

AN 1980:413822 HCAPLUS

DN 93:13822

TI Enthalpies and entropies of activation of the oxidation of manganese(II) aminopolycarboxylate complexes by bromine and tribromide ion

AU Vierling, Francois

CS Ec. Natl. Super. Chim., Univ. Louis-Pasteur, Strasbourg, 67008, Fr.

SO Bull. Soc. Chim. Fr. (1980), (3-4, Pt. 1), 144-8

CODEN: BSCFAS; ISSN: 0037-8968

DT Journal

LA French

AB The 1-electron redn. of Br<sub>2</sub> occurs in oxidn. reactions of aminopolycarboxylate complexes of Mn(II) by halogens in which an inner-sphere mechanism is involved. The approach of the inner coordination spheres of Mn(II) complexes and the Br<sub>2</sub> or Br<sub>3</sub><sup>-</sup> ion requires a comparable energy, regardless of the nature of the ligand: EDTA or CyDTA. The activation entropies are all very neg.; the activated complex structure is closer to that of the inner-sphere intermediate than to that of the reaction product.

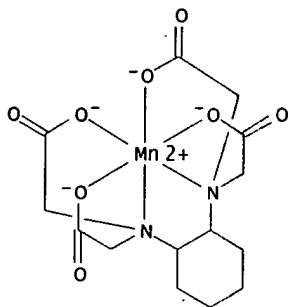
IT 14650-07-8 52279-49-9

RL: RCT (Reactant)

(oxidn. of, by bromine and tribromide, kinetics and mechanism of)

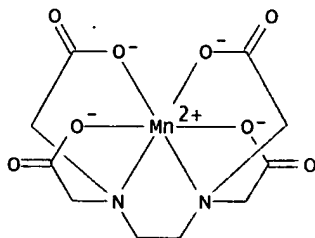
RN 14650-07-8 HCAPLUS

CN Manganate(2-), [[rel-N,N'-(1R,2R)-1,2-cyclohexanediyl]bis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, (OC-6-21)- (9CI) (CA INDEX NAME)



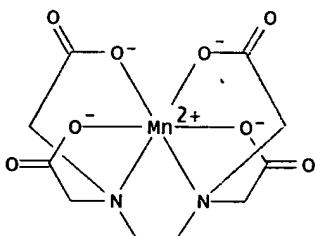
RN 52279-49-9 HCAPLUS

CN Manganate(2-), [[N,N'-1,2-ethanediyl]bis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, (OC-6-21)- (9CI) (CA INDEX NAME)



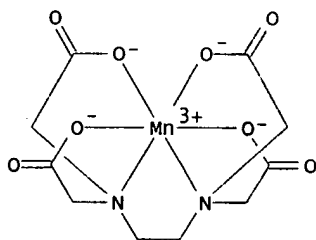
=&gt; d bib abs hitstr 174 14

L74 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1979:621629 HCAPLUS  
 DN 91:221629  
 TI Superoxide and manganese(III). Reactions of manganese  
 -EDTA and manganese-CyDTA complexes with molecular oxygen.  
 X-ray structure of potassium manganese-EDTA.2 water  
 AU Stein, Judith; Fackler, J. P., Jr.; McClune, Gregory J.; Fee, James A.;  
 Chan, L. T.  
 CS Dep. Chem., Case West. Reserve Univ., Cleveland, OH, 44106, USA  
 SO Inorg. Chem. (1979), 18(12), 3511-19  
 CODEN: INOCAJ; ISSN: 0020-1669  
 DT Journal  
 LA English  
 AB The reactions of MnIIIL-, MnIIL2-, and MnIIICyDTA- (H4L = EDTA; H4CyDTA =  
 1,2-cyclohexanediaminetetraacetic acid) with superoxide were studied in  
 both aq. and nonaq. solvents. In anhyd. Me2SO, the redn. of MnIIIL- to  
 MnIIL2- by superoxide was characterized by stopped-flow kinetic  
 measurements, rapid-scan spectrophotometry, ESR, and cyclic voltammetry.  
 The reaction is 2nd order with a rate const. of 5 .times. 104 M-1 s-1 at  
 20.degree.. The reaction of MnIIICyDTA- is analogous, having a rate  
 const. of .apprx.1 .times. 106 M-1 s-1. Addn. of superoxide to a MnIIL2-  
 soln. in Me2SO produces a green intermediate which changes to a  
 yellow-brown final product. Although Mn aminocarboxylate  
 complexes do not catalyze the dismutation of superoxide in aq. soln., the  
 complexes do react with superoxide. MnIIIL- is reduced to MnIIL2- by  
 superoxide in H2O. MnIIL2- and superoxide interact to form a blue  
 intermediate which dissoc. to regenerate MnIIL2- and the spontaneous  
 dismutation products. The reactions of Mn aminocarboxylate  
 complexes with H2O2, Na peroxide, and dioxygen in Me2SO are also  
 discussed. The crystal and mol. structure of KMnL.2H2O was detd. by  
 single-crystal x-ray diffraction techniques by using 1684 unique  
 reflections in the range 2.degree. .ltoreq. 2.theta. .ltoreq. 50.degree..  
 KMnL.2H2O crystallizes in the orthorhombic space group P212121 with a  
 6.579(1), b 23.161(7), and c 10.054(3) .ANG.. There are 4 mols. in the  
 unit cell. Refinement of the non H atoms by least-squares procedures gave  
 a final R1 value of 0.065. In the complex anion, the Mn is  
 coordinated by the hexadentate EDTA ligand producing a distorted  
 octahedral MnN2O4 geometry. The closest H2O mol. is >4 .ANG. away from  
 the Mn. The K counterion is coordinated to 6 O atoms from  
 carboxylate and H2O groups. Av. Mn-N and Mn-O (2  
 types) bond lengths are 2.22(1), 2.03(1), and 1.90(1) .ANG.. The presence  
 of 2 short Mn-O bonds and 4 long Mn-O and Mn  
 -N bonds is opposite to the distortions obsd. in the 3d9 CuN2O4 complexes,  
 wherein the metal-O bonds are generally longest, a result thought to be  
 consistent with Jahn-Teller effects. The diffusion coeffs. of chem.  
 prepd. O2- solns. and of dioxygen in Me2SO were detd. by single-step  
 chronoamperometry. These values, 1.1 .times. 10-5 and 2.93 .times. 10-5  
 cm2/s, resp., are in good agreement with less accurate values reported  
 previously by other workers. The electrochem. of the aforementioned  
 Mn aminocarboxylate complexes is also reported.  
 IT 15375-84-5  
 RL: RCT (Reactant)  
 (reactions of, with superoxide and peroxide ions and with oxygen)  
 RN 15375-84-5 HCAPLUS  
 CN Manganate(2-), [[N,N'-1,2-ethanediylbis[N-[(carboxy-  
 .kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, disodium, (OC-6-21)-  
 (9CI) (CA INDEX NAME)



● 2 Na<sup>+</sup>

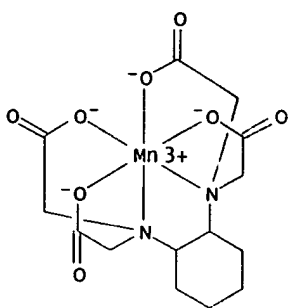
IT 66615-87-0  
 RL: RCT (Reactant)  
 (redn. by superoxide ion in aq. and di-Me sulfoxide solns. and crystal structure of)  
 RN 66615-87-0 HCAPLUS  
 CN Manganate(1-), [[N,N'-1,2-ethanediyldis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, potassium, dihydrate, (OC-6-21)- (9CI) (CA INDEX NAME)



● K<sup>+</sup>

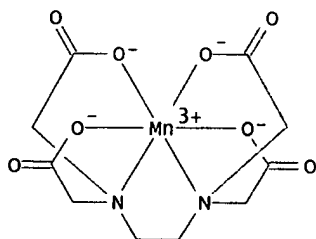
● 2 H<sub>2</sub>O

IT 38127-69-4  
 RL: RCT (Reactant)  
 (redn. of, by superoxide ion in di-Me sulfoxide, kinetics of)  
 RN 38127-69-4 HCAPLUS  
 CN Manganate(1-), [[N,N'-(trans-1,2-cyclohexanediyl)bis[N-[(carboxy-kappa.O)methyl]glycinato-kappa.N,.kappa.O]](4-)]-, potassium, (OC-6-21)- (9CI) (CA INDEX NAME)

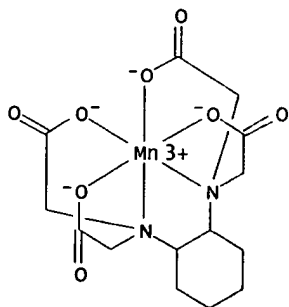


=&gt; d bib abs hitstr 174 15

L74 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1979:620180 HCAPLUS  
 DN 91:220180  
 TI Photolysis of solutions of manganese(III)  
 aminopolycarboxylates  
 AU Strel'mashok, V. E.; Poznyak, A. L.  
 CS Inst. Fiz., Minsk, USSR  
 SO Koord. Khim. (1979), 5(7), 1019-24  
 CODEN: KOKHDC  
 DT Journal  
 LA Russian  
 AB The photolysis of  $\text{KMnL}$  and  $\text{KMnL}'$  ( $\text{H}_4\text{L} = \text{EDTA}$ ,  $\text{H}_4\text{L}' = 1,2\text{-trans-cyclohexanediaminetetraacetic acid}$ ) were studied at 77 K in 2.5M  $\text{Mg}(\text{ClO}_4)_2$  and the EPR and UV-visible spectra were recorded. The products of the photolysis were identified, and a mechanism for the formation of these products was discussed.  
 IT 15708-46-0 38127-69-4  
 RL: RCT (Reactant)  
 (photolysis of, in frozen aq. solns., mechanism of and product formation in)  
 RN 15708-46-0 HCAPLUS  
 CN Manganate(1-),  $[[\text{N},\text{N}'\text{-}1,2\text{-ethanediy]bis}[\text{N}-[(\text{carboxy-}\kappa\text{O})\text{methyl}]\text{glycinato-}\kappa\text{N},\kappa\text{O}]](4-)]^-$ , potassium, (OC-6-21)-(9CI) (CA INDEX NAME)

● K<sup>+</sup>

RN 38127-69-4 HCAPLUS  
 CN Manganate(1-),  $[[\text{N},\text{N}'\text{-(trans-1,2-cyclohexanediy)]bis}[\text{N}-[(\text{carboxy-}\kappa\text{O})\text{methyl}]\text{glycinato-}\kappa\text{N},\kappa\text{O}]](4-)]^-$ , potassium, (OC-6-21)-(9CI) (CA INDEX NAME)

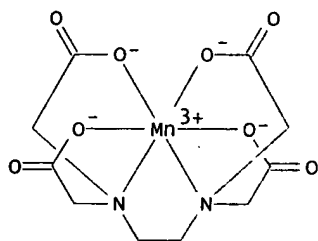
K<sup>+</sup>

CEPERLEY 09/576,960

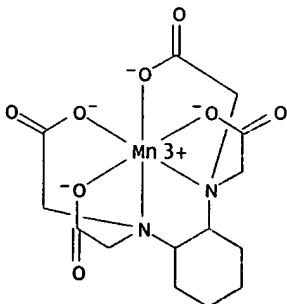


=&gt; d bib abs hitstr 174 16

L74 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1975:3650 HCAPLUS  
 DN 82:3650  
 TI Thermal decomposition products of ethylenedinitrilotetraacetatomanganate(I  
 II) and trans-1,2-cyclohexylenedinitrilotetraacetatomanganate(III)  
 complexes  
 AU Shirakashi, Takashi; Tanaka, Nobuyuki  
 CS Fac. Sci., Tohoku Univ., Sendai, Japan  
 SO Nippon Kagaku Kaishi (1974), (6), 1061-7  
 CODEN: NKA888  
 DT Journal  
 LA Japanese  
 GI For diagram(s), see printed CA Issue.  
 AB Thermal decompn. of K [(ethylenedinitrilo)tetraacetato]manganate and K  
 [(trans-1,2-cyclohexylenedinitrilo)tetraacetato]manganate gave ligands  
 HO<sub>2</sub>CCH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>N(CH<sub>2</sub>CO<sub>2</sub>H)<sub>2</sub> (I) and II in addn. to the ligands of the  
 starting compds. and CO, CO<sub>2</sub>, and CH<sub>2</sub>O. I and II were identified via  
 their Co complexes. An intermol. electron transfer reaction is involved  
 in the thermal decompn. in the solid state of the Mn complexes,  
 which gives rise to new ligands.  
 IT 15708-46-0 38127-69-4  
 RL: RCT (Reactant)  
 (thermal decomposition of, mechanism of)  
 RN 15708-46-0 HCAPLUS  
 CN Manganate(1-), [[N,N'-1,2-ethanediy]bis[N-[(carboxy-  
 .kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, potassium, (OC-6-21)-  
 (9CI) (CA INDEX NAME)

● K<sup>+</sup>

RN 38127-69-4 HCAPLUS  
 CN Manganate(1-), [[N,N'-(trans-1,2-cyclohexanediy]bis[N-[(carboxy-  
 .kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, potassium, (OC-6-21)-  
 (9CI) (CA INDEX NAME)

K<sup>+</sup>

=&gt; d bib abs hitstr 174 17

L74 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2001 ACS

AN 1974:541407 HCAPLUS

DN 81:141407

TI Oxidation of aminopolycarboxylate complexes of bivalent transition metals by halogens. Mechanism and free energy relations

AU Woodruff, William H.; Margerum, Dale W.

CS Dep. Chem., Purdue Univ., West Lafayette, Indiana, USA

SO Inorg. Chem. (1974), 13(11), 2578-85

CODEN: INOCAJ

DT Journal

LA English

AB The mechanisms of oxidn. of MIIL<sub>2</sub><sup>-</sup> to the M(III) complexes by X<sub>2</sub> and X<sub>3</sub><sup>-</sup> are studied where M is Fe, Co, and Mn, X is I and Br, and L is EDTA and trans-1,2-diaminocyclohexanetetraacetate (CyDTA). The reactions are 1st order in MIIL<sub>2</sub><sup>-</sup> concn. and 1st order in total halogen concn. The rate consts. for the Fe(II) reactions are 9-11 orders of magnitude greater than those for the analogous Mn(II) and Cd(II) reactions. A general mechanism for these reactions is proposed in which 1-electron redn. of the halogens takes place after inner-sphere coordination. However, the activation parameters and the rate consts. indicate that the position of the rate-detg. step differs with the reactant pairs examd. The rates of oxidn. of FeIIL<sub>2</sub><sup>-</sup> by Br<sub>2</sub>, Br<sub>3</sub><sup>-</sup>, and I<sub>2</sub> appear to be controlled by the rate at which the oxidant enters the coordination sphere of the metal ion. The rates of oxidn. of FeIIL<sub>2</sub><sup>-</sup> by I<sub>3</sub><sup>-</sup> and of CoIIL<sub>2</sub><sup>-</sup> and MnIIL<sub>2</sub><sup>-</sup> by X<sub>2</sub> and X<sub>3</sub><sup>-</sup> are limited by the electron-transfer process subsequent to the coordination of the oxidant. Marcus-type free energy correlations are found for the latter inner-sphere reactions plus the reactions of V<sup>2+</sup> (aq) and Fe<sup>2+</sup> (aq) with halogens, spanning large ranges in the  $\Delta G^\circ$  value for the 1-electron redox reactions. This permits self-exchange electron-transfer rate consts. to be estimated as 8.5  $\times 10^4$  M<sup>-1</sup> sec<sup>-1</sup> for I<sub>2</sub> and I<sub>2</sub><sup>-</sup> and 29 M<sup>-1</sup> sec<sup>-1</sup> for Br<sub>2</sub> and Br<sub>2</sub><sup>-</sup>.

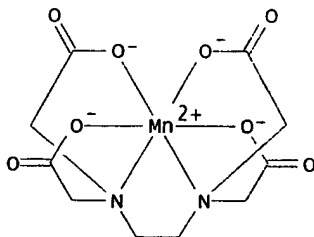
IT 52279-49-9

RL: RCT (Reactant)

(oxidn. of, by bromine, kinetics and mechanism of)

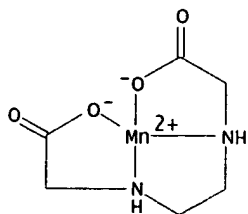
RN 52279-49-9 HCAPLUS

CN Manganate(2-), [[N,N'-1,2-ethanediylbis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, (OC-6-21)- (9CI) (CA INDEX NAME)

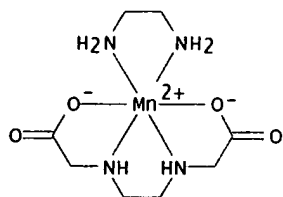


=&gt; d bib abs hitstr 174 18

L74 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1970:407988 HCAPLUS  
 DN 73:7988  
 TI Thermodynamics of ion association. XXI. Mixed complexes of transition metal ions with aminopolycarboxylate and amine ligands  
 AU Degischer, G.; Nancollas, George H.  
 CS Dep. of Chem., State Univ. of New York, Buffalo, N. Y., USA  
 SO Inorg. Chem. (1970), 9(5), 1259-62  
 CODEN: INOCAJ  
 DT Journal  
 LA English  
 AB The assocn. of the divalent metal ions Mn, Co, Ni, Zn, and Cd with ethylenediaminediacetic acid (EDDA) and ethylenediaminedipropionic acid has been studied potentiometrically at 25.degree. and a const. ionic strength of 0.10M. A sensitive calorimeter has been used to measure the enthalpy changes. The further assocn., with ethylenediamine, of these 1:1 complexes together with CuEDDA to form 1:1:1 mixed complexes has also been studied by the same methods. The thermodynamic functions are discussed in terms of the important factors involved in the assocn. reactions, and the temp.-dependent and temp.-independent components of  $\Delta H$  have been calcd.  
 IT 29977-09-1 29977-14-8  
 RL: PROC (Process)  
 (thermodynamics of formation of)  
 RN 29977-09-1 HCAPLUS  
 CN Manganese, [[N,N'-1,2-ethanediylbis[glycinato]](2-)-N,N',O,O']- (9CI) (CA INDEX NAME)

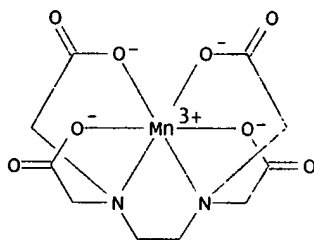


RN 29977-14-8 HCAPLUS  
 CN Manganese, (ethylenediamine)[(N,N'-ethylenediglycinato)(2-)]- (8CI) (CA INDEX NAME)



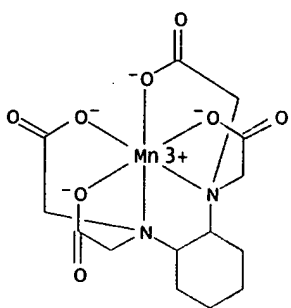
=&gt; d bib abs hitstr 174 19

L74 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1967:34395 HCAPLUS  
 DN 66:34395  
 TI Preparation and characterization of some amino-polycarboxylate complexes of manganese(III)  
 AU Hamm, Randall E.; Suwyn, Mark A.  
 CS Washington State Univ., Pullman, Wash., USA  
 SO Inorg. Chem. (1967), 6(1), 139-42  
 CODEN: INOCAJ  
 DT Journal  
 LA English  
 AB The complexes of Mn(III) with trans-1,2-diaminocyclohexanetetraacetic acid (Cy-DTA), EDTA, and hydroxyethylethylenediaminetriacetic acid (HEDTA) were prep'd. in the cryst. state. The absorption spectra of these compds. and the compds. prep'd. from them by addn. of base were obtained. The rates of decompn. of the complexes in acidic soln. were established. The slowest decompn. was found for MnIIICyDTA- complex with a 1st-order rate const. of 6.8 .times. 10-6 sec.-1 at 25.degree.. MnIIIEDTA- and MnIIIHEDTA gave 1st-order rate consts. for decompn. of 1.2 .times. 10-5 and 4.2 .times. 10-5 sec.-1 at 25.degree.. The standard potentials for the reaction MnIII L + e- -> MnII L were det'd. for the 3 complexes. These potentials showed all 3 complexes to be about equally good as oxidizing agents. The formation const. of the 3 Mn(III) complexes were calcd.  
 IT 12084-06-9P 12086-30-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)  
 RN 12084-06-9 HCAPLUS  
 CN Manganate(1-), [[N,N'-1,2-ethanediy]bis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, potassium, hydrate (2:5), (OC-6-21)- (9CI) (CA INDEX NAME)

● K<sup>+</sup>● 5/2 H<sub>2</sub>O

RN 12086-30-5 HCAPLUS  
 CN Manganate(1-), [[N,N'-1,2-cyclohexanediy]bis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, potassium, hydrate (2:5), [OC-6-21-(trans)]- (9CI) (CA INDEX NAME)

CEPERLEY 09/576,960



● 5/2 H<sub>2</sub>O

● K<sup>+</sup>

=&gt; d bib abs 175 1

L75 ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2001 ACS

AN 1999:464048 HCAPLUS

DN 131:82989

TI Nitric oxide-releasing chelating agents and their therapeutic use

IN Towart, Robertson; Karlsson, Jan Olof Gustav; Wistrand, Lars Goran;  
Malmgren, Hakan

PA Nycomed Imaging A/S, Norway

SO PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9933823	A1	19990708	WO 1998-GB3840	19981218
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA			
	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	AU 9917702	A1	19990719	AU 1999-17702	19981218
	EP 1060174	A1	20001220	EP 1998-962567	19981218
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
PRAI	GB 1997-27226		19971223		
	US 1998-76793		19980304		
	GB 1998-5450		19980313		
	WO 1998-GB3840		19981218		
OS	MARPAT 131:82989				
AB	Chelating agents, in particular dipyrroxyl and aminopolycarboxylic acid-based chelating agents, and their metal chelates, when linked directly or indirectly to at least one nitric oxide-releasing moiety, or when use in combination with nitric oxide or a nitric oxide-releasing moiety, have been found to be effective in treating a variety of disorders. In particular, such compds. may be used in treating conditions assocd. with the presence of free radicals in the body, e.g. reperfusion injuries, and in reducing the cardiotoxicity of anti-tumor agents, e.g. anthracyclines and/or paclitaxel.				

RE.CNT 9

RE

(1) Keefer, L; US 5250550 A 1993 HCAPLUS

(3) Mooradian, D; JOURNAL OF CARDIOVASCULAR PHARMACOLOGY 1995, V25(4), P674 HCAPLUS

(4) Nitromed Inc; WO 9639409 A 1996 HCAPLUS

(5) Robertson, T; WO 9749390 A 1997 HCAPLUS

(6) Salutar Inc; EP 0292761 A 1988 HCAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs 175 2

L75 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2001 ACS

AN 1998:344354 HCAPLUS

DN 129:31312

TI Granulates based on agglomerated colored clay particles, and their manufacture and use

IN Manz, Joachim; Molders, Armand

PA Cerdec Aktiengesellschaft Keramische Farben, Germany

SO Eur. Pat. Appl., 6 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 842911	A1	19980520	EP 1997-119583	19971108
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRAI DE 1996-19646944 19961113

AB The granulates are obtained by contacting spray granulated colorless clays with a soln. of .gtoreq.1 org. complexes of coloring metal ions. The granulates are used for manufg. unglazed clay tiles. Thus, 45.6 kg SG-FG (spray granulated colorless clay) was mixed with 3.6 kg Merapon 2005 (Co hydroxycarboxylate), and the resulting granules used for manufg. blue-stained clay tiles.

=&gt; d bib abs 175 3

L75 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1998:84784 HCAPLUS  
 DN 128:227989  
 TI Synthesis of a new polyaminopolycarboxylic acid (BPHA) and its labeling with 99mTc  
 AU Liu, Guozheng; Liu, Boli  
 CS Isotope Department, China Institute of Atomic Energy, Beijing, 102413, Peop. Rep. China  
 SO J. Labelled Compd. Radiopharm. (1998), 41(2), 97-104  
 CODEN: JLCRD4; ISSN: 0362-4803  
 PB John Wiley & Sons Ltd.  
 DT Journal  
 LA English  
 AB N,N'-Bis(2-aminoethyl)propanediamine hexaacetic acid (BPHA) has been prepd. as a tetrachloride salt. It has been characterized by 1H NMR, Pos. FAB MS, and elemental anal. BPHA is easily labeled with 99mTc in the pH range of 2-5 using SnCl2.cntdot.2H2O as reductant. The radioactive complex accumulates in both kidneys and liver and is fast excreted.

=&gt; d ind 3

L75 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2001 ACS  
 CC 8-9 (Radiation Biochemistry)  
 Section cross-reference(s): 78  
 ST technetium 99m polyaminopolycarboxylate complex prepn  
 biodistribution  
 IT Kidney  
 Liver  
 (synthesis and biodistribution of polyaminopolycarboxylic acid 99mTc complex)  
 IT 14133-76-7DP, Tc-99, complex with N,N'-Bis(2-aminoethyl)propanediamine hexaacetic acid, biological studies 204633-60-3DP, technetium complex  
 RL: BPR (Biological process); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)  
 (synthesis and biodistribution of polyaminopolycarboxylic acid 99mTc complex)  
 IT 79-11-8, Chloroacetic acid, reactions 4741-99-5, N,N'-Bis(2-aminoethyl)-1,3-propanediamine 23288-61-1  
 RL: RCT (Reactant)  
 (synthesis and biodistribution of polyaminopolycarboxylic acid 99mTc complex)  
 IT 204633-59-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (synthesis and biodistribution of polyaminopolycarboxylic acid 99mTc complex)



=> d bib abs 175 4

L75 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1994:477445 HCAPLUS  
 DN 121:77445  
 TI Development of new radiopharmaceuticals - technetium  
 aminopolycarboxylate complexes  
 AU Havranek, E.; Bumbalova, A.; Krenek, P.; Komova, M.; Belakova, M.  
 CS Fac. Pharm., Comenius Univ., Bratislava, Slovakia  
 SO Pharmazie (1994), 49(5), 369-70  
 CODEN: PHARAT; ISSN: 0031-7144  
 DT Journal  
 LA English  
 AB Results are presented of studies of technetium-99m complexes  
 with EDTA, EDDA and NTA derivs. as kidney imaging agents in rats. A list  
 of the aminopolycarboxylate complexes and their biodistribution  
 in rats are given.

=> d bib abs 175 5

L75 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2001 ACS  
AN 1993:466706 HCAPLUS  
DN 119:66706  
TI New radiopharmaceuticals based on N-substitution of nitrilotriacetic acid  
AU Havranek, E.; Bumbalova, A.; Belakova, M.; Komova, M.; Krenek, P.  
CS Fac. Pharm., Comenius Univ., Bratislava, Czech.  
SO J. Radioanal. Nucl. Chem. (1993), 175(3), 161-71  
CODEN: JRNCDM; ISSN: 0236-5731  
DT Journal  
LA English  
AB The labeling characteristics and biol. behavior in rats of the following 5  
aminopolycarboxylic acid derivs. have been studied: N-  
(phosphonomethyl)nitrilodiacetic acid (99mTc-MPIDA), N,N-  
(diphosphono)aminoacetic acid (99mTc-GDP), N-(2-  
carbamoylethyl)nitrilodiacetic acid (99mTc-KEIDA), N-(2,3-  
dihydroxypropyl)nitrilodiacetic acid (99mTc-DPKA), and  
2-[N-(2-hydroxyethyl)-N-carboxymethyl]aminopropanoic acid (99mTc-EAPA).

=&gt; d bib abs 175 6

L75 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2001 ACS

AN 1992:230931 HCAPLUS

DN 116:230931

TI Preparation of polyaminopolycarboxylic acids and their chelation with metals, for use as contrast agents

IN Elgavish, Garbriel A.; Kim, Sung K.

PA Research Corp. Technologies, Inc., USA

SO PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9114178	A1	19910919	WO 1991-US1633	19910311
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
	US 5154914	A	19921013	US 1990-492519	19900312
	CA 2077556	AA	19910913	CA 1991-2077556	19910311
	EP 524984	A1	19930203	EP 1991-907102	19910311
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	JP 05505195	T2	19930805	JP 1991-506576	19910311
	US 5242681	A	19930907	US 1992-925352	19920804
	US 5370860	A	19941206	US 1993-100660	19930729
	US 5460799	A	19951024	US 1994-292477	19940818
PRAI	US 1990-492519		19900312		
	WO 1991-US1633		19910311		
	US 1992-925352		19920804		
	US 1993-100660		19930729		

OS MARPAT 116:230931

AB The polyaminopolycarboxylic acids [R1(CHR)b][R2(CHR)b]NCH2[CH2N((CH2)bx)CH2]aCH2N[(CH2R)br3][(CH2R)br4] (R = H, alkyl, OH, halo, alkoxy, aryl, aralkyl; R1-R4, X = H, OH, CO2H, R5CO2, etc.; R5 = C6-30 hydrocarbyl; .gtoreq.1 R1-R4 or X = R5CO2; a = 0, 1-5; b = 1-5) are prepd. and complexed with metal ions (at. no. 21-29, 42-44, 57-83) to give contrast agents, esp. useful for NMR. N,N-Bis(benzyloxycarbonylmethyl)bromoacetamide (prepn. given) was reacted with N,N-bis(2-hydroxyethyl)ethylenediamine in Et3N-contg. DMF, to give an intermediate, which upon treatment with myristoyl chloride, in dimethylaminopyridine-contg. benzyl chloroformate, gave N-(myristoyloxyethyl)-N'-(2-benzyloxycarbonyloxyethyl)-N,N-bis[N',N'-bis(benzyloxycarbonylmethyl)acetamido]-1,2-ethanediamine. This was hydrogenated over Pd/C, in EtOH, to give N-(2-myristoyloxyethyl)-N'-(2-hydroxyethyl)-N,N'-bis[N',N'-bis(carboxymethyl)acetamido]-1,2-ethanediamine (I). I was complexed with GdCl3.cntdot.6H2O and the 1:1 I-Gd+3 complex was incorporated into liposomes. The suitability of the complex as a contrast agent was demonstrated by NMR relaxivity measurements.

=&gt; d bib abs 175 7

L75 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1990:433966 HCAPLUS  
 DN 113:33966  
 TI Kinetic and spectrophotometric determination of trace zinc(II) in the presence of a large amount of lead(II) using ligand-substitution reactions of their metalloporphyrins with EDTA  
 AU Tabata, Masaaki; Kajihara, Naoko  
 CS Fac. Sci. Eng., Saga Univ., Saga, 840, Japan  
 SO Anal. Sci. (1989), 5(6), 719-24  
 CODEN: ANSCEN; ISSN: 0910-6340  
 DT Journal  
 LA English  
 AB The formation const. of the lead(II) complex of 5,10,15,20-tetrakis(4-sulfonatophenyl)porphine (H<sub>2</sub>TPPS<sub>4</sub>) (log K) defined as Pb<sup>2+</sup> + H<sub>2</sub>TPPS<sub>4</sub> .dblharw. Pb(II)(TPPS<sub>4</sub>) + 2H<sup>+</sup> is -9.97 +/- 0.02, which is 109 times smaller than that of Zn(II)(TPPS<sub>4</sub>). In addn., Pb(II)(TPPS<sub>4</sub>) was rapidly replaced with EDTA with a half-life 200 ms. Zn(II)(TPPS<sub>4</sub>) is stable and does not react with EDTA even after 2 h. The large difference in the equil. and kinetic behavior between Zn(II)- and Pb(II)(TPPS<sub>4</sub>) allows the detn. of zinc(II) at as low as 10<sup>-7</sup> mol dm<sup>-3</sup> in the presence of 10<sup>-2</sup> mol dm<sup>-3</sup> lead(II). The molar absorptivity of Zn(II)(TPPS<sub>4</sub>) is 4.66 .times. 10<sup>5</sup> mol<sup>-1</sup> dm<sup>3</sup> cm<sup>-1</sup>. The method was applied to the detn. of zinc(II) in lead chems. (lead(II) nitrate, lead(II) acetate and lead metal) and in tap and waste waters by measurement of the absorbance at 421 nm. The optimum conditions of the ligand-buffer soln. contg. aminopolycarboxylates and lead(II) are described to remove the interference of copper(II), cobalt(II) and manganese(II).

=&gt; d bib abs 175 8

L75 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1989:420474 HCAPLUS  
 DN 111:20474  
 TI Metal complexes of aminopolycarboxylic acids for diagnostic imaging  
 IN Gries, Heinz; Renneke, Franz-Josef; Weinmann, Hanns Joachim  
 PA Schering A.-G., Fed. Rep. Ger.  
 SO Ger. Offen., 15 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3621026	A1	19871223	DE 1986-3621026	19860620
	EP 250358	A2	19871223	EP 1987-730065	19870615
	EP 250358	A3	19881005		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	DK 8703148	A	19871221	DK 1987-3148	19870619
	NO 8702590	A	19871221	NO 1987-2590	19870619
	JP 63005077	A2	19880111	JP 1987-151566	19870619
	AU 8774628	A1	19871224	AU 1987-74628	19870622

PRAI DE 1986-3621025 19860620  
 DE 1986-3621026 19860620

AB Aminopolycarboxylic acid complexes  $XO_2CCH_2N(CH_2V_1)CHR_2CHR_4NR_1CHR_5CHR_3N(CH_2V_2)CH_2CO_2X$  [I;  $V_1 = CO_2X$ , CONR6R7;  $V_2 = V_1$ , COB; B = protein, lipid;  $R_1 = H$ ,  $CH_2CO_2X$ ;  $R_2, R_3 = (CH_2)_m$  if  $R_4 = R_5 = H$ ;  $R_4, R_5 = CH_2CHR_2(CH_2)m$  if  $R_2 = R_3 = H$ ;  $m = 0, 1$ ;  $R_6 = (OH\text{-substituted}) C_2\text{-}7$  alkyl;  $R_7 = H$ ,  $C_1\text{-}7$  alkyl, OH-substituted  $C_2\text{-}7$  alkyl;  $R_8 = H$ ,  $U(CH_2)_{pc6H4w}$ -protein;  $U = O, N, S$ ;  $p = 1, 2$ ;  $W = NN, NHCOCH_2, NHCS, OCH_2CO, OCH_2CONHNH, NHCH_2CO, NHCH_2CONHNH, OCH_2CONH(CH_2)_nCO$ ;  $n = 1\text{-}15$ ;  $X = H$ , metal ion equiv., cation of an inorg. or org. base or amino acid] are prep'd. for use e.g. in NMR tomog. 2,6-Bis(aminomethyl)pyridine-3HCl was hydrogenated over Rh/C to 2,6-bis(aminomethyl)piperidine-3HCl, condensed with  $BrCH_2CO_2Et$  in the presence of  $AcNMe_2$  and  $K_2CO_3$ , and sapon'd. to produce 2,6-bis[N,N-bis(carboxymethyl)aminomethyl]-1-piperidineacetic acid (II), a complexing agent, in 57% yield. An aq. suspension of II was heated with  $Gd_2O_3$  at 100.degree. for 3 h to produce the II  $Gd(III)$  complex, which was converted to the di-N-methylglucamine salt by suspending 58.76 g of the complex in 40 mL  $H_2O$  and adding 0.18 g  $NMe_2\text{-HCl}$  and 39.1 g N-methylglucamine. The soln. was made up to 100 mL with  $H_2O$ , dispersed into ampuls, and heat-sterilized.

=&gt; d ind 8

L75 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2001 ACS  
 IC ICM C07D211-34  
 ICS C07D211-36; C07D413-06; A61K049-00; A61K049-04; C07D265-32  
 ICA C07D211-26; C07D265-32  
 CC 9-1 (Biochemical Methods)  
 Section cross-reference(s): 23, 27  
 ST aminopolycarboxylate metal complex imaging diagnosis  
 IT Diagnosis  
 (aminopolycarboxylic acid complexes as contrast media and tracers for)  
 IT Scintigraphy  
 (aminopolycarboxylic acid complexes for)  
 IT Liposome  
 (aminopolycarboxylic acid complexes in, for diagnostic imaging)  
 IT Radiography  
 (contrast agents for, aminopolycarboxylic acid complexes as)  
 IT Sound and Ultrasound, biological effects  
 (imaging by, contrast media for, aminopolycarboxylic acid complexes as)  
 IT Phosphatidylcholines, biological studies  
 RL: BIOL (Biological study)  
 (liposomes contg. cholesterol and, aminopolycarboxylic acid complexes in, for diagnostic imaging)  
 IT Melanoma  
 (monoclonal antibody to, conjugates with aminocarboxylic acid complexes, for diagnostic imaging)  
 IT Tomography  
 (NMR, contrast agents for, aminopolycarboxylic acid complexes as)  
 IT Albumins, compounds

- RL: ANST (Analytical study)  
(conjugates, with aminopolycarboxylic acid complexes, for diagnostic imaging)
- IT Antibodies  
RL: ANST (Analytical study)  
(monoclonal, to melanoma, conjugates with aminocarboxylic acid complexes, for diagnostic imaging)
- IT Amino acids, compounds  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(polybasic, complexes, prepn. of, for diagnostic imaging)
- IT 7429-91-6D, Dysprosium, complexes with aminocarboxylic acids 7439-88-5D, Iridium, complexes with aminocarboxylic acids 7439-89-6D, Iron, complexes with aminocarboxylic acids 7439-91-0D, Lanthanum, complexes with aminocarboxylic acids 7439-96-5D, Manganese, complexes with aminocarboxylic acids 7439-98-7D, Molybdenum, complexes with aminocarboxylic acids 7440-00-8D, Neodymium, complexes with aminocarboxylic acids 7440-02-0D, Nickel, complexes with aminocarboxylic acids 7440-10-0D, Praseodymium, complexes with aminocarboxylic acids 7440-12-2D, Promethium, complexes with aminocarboxylic acids 7440-18-8D, Ruthenium, complexes with aminocarboxylic acids 7440-19-9D, Samarium, complexes with aminocarboxylic acids 7440-20-2D, Scandium, complexes with aminocarboxylic acids 7440-24-6D, Strontium, complexes with aminocarboxylic acids 7440-26-8D, Technetium, complexes with aminocarboxylic acids 7440-27-9D, Terbium, complexes with aminocarboxylic acids 7440-30-4D, Thulium, complexes with aminocarboxylic acids 7440-32-6D, Titanium, complexes with aminocarboxylic acids 7440-45-1D, Cerium, complexes with aminocarboxylic acids 7440-47-3D, Chromium, complexes with aminocarboxylic acids 7440-48-4D, Cobalt, complexes with aminocarboxylic acids 7440-50-8D, Copper, complexes with aminocarboxylic acids 7440-52-0D, Erbium, complexes with aminocarboxylic acids 7440-53-1D, Europium, complexes with aminocarboxylic acids 7440-54-2D, Gadolinium, complexes with aminocarboxylic acids 7440-55-3D, Gallium, complexes with aminocarboxylic acids 7440-56-4D, Germanium, complexes with aminocarboxylic acids 7440-60-0D, Holmium, complexes with aminocarboxylic acids 7440-62-2D, Vanadium, complexes with aminocarboxylic acids 7440-64-4D, Ytterbium, complexes with aminocarboxylic acids 7440-65-5D, Yttrium, complexes with aminocarboxylic acids 7440-74-6D, Indium, complexes with aminocarboxylic acids
- RL: ANST (Analytical study)  
(for diagnostic imaging)
- IT 57-88-5, Cholesterol, biological studies  
RL: BIOL (Biological study)  
(liposomes contg. phosphatidylcholines and, aminopolycarboxylic acid complexes in, for diagnostic imaging)
- IT 118860-16-5P 118860-18-7P 118860-23-4P 118860-24-5P 121136-79-6P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, as complexing agent, diagnostic imaging in relation to)
- IT 121227-38-1P 121227-40-5P 121227-41-6P 121227-42-7P 121252-35-5P 121252-36-6P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, for diagnostic imaging)
- IT 118860-17-6P 118860-19-8P 118860-21-2P 118889-39-7P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, in complexing agent prepn., diagnostic imaging in relation to)
- IT 105-36-2, Ethyl bromoacetate 111-42-2, reactions 40137-22-2 87032-71-1  
RL: RCT (Reactant)  
(reaction of, in complexing agent prepn., diagnostic imaging in relation to)
- IT 38881-63-9  
RL: RCT (Reactant)  
(redn. of, in complexing agent prepn., diagnostic imaging in relation to)

=&gt; d bib abs 175 9

L75 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2001 ACS

AN 1988:185725 HCAPLUS

DN 108:185725

TI Preparation of concentrated aqueous solutions containing trace elements,  
for plant growth stimulation.

IN Matsunaga, Michiko

PA Teikoku Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 2 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62138458	A2	19870622	JP 1985-278470	19851211
	JP 07010818	B4	19950208		
AB	A fertilizer soln. is prepd. contg. polyaminopolycarboxylate, Fe, Mn, Zn, Cu, Co, and Mo salts, with or without H <sub>3</sub> BO <sub>3</sub> , in addn. to H <sub>3</sub> PO <sub>4</sub> and NH <sub>3</sub> . An aq. fertilizer was prepd. from EDTA-Fe Na.cntdot.2H <sub>2</sub> O 3.14, EDTA-Co Na <sub>2</sub> .4H <sub>2</sub> O 0.204, EDTA Mo <sub>2</sub> O <sub>4</sub> Na <sub>2</sub> .cntdot.H <sub>2</sub> O 2.275, EDTA-Zn Na <sub>2</sub> .cntdot.4H <sub>2</sub> O 1.524, EDTA-Cu.cntdot.Na <sub>2</sub> .cntdot.3H <sub>2</sub> O 0.062, H <sub>3</sub> BO <sub>3</sub> 15.9, H <sub>2</sub> O 300, 28 % aq. NH <sub>3</sub> 29.69 and H <sub>3</sub> PO <sub>4</sub> 3.84 g (pH 8.2). No pptn. was obsd. when the soln. was stored >1 mo.				

=&gt; d bib abs 175 10

L75 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2001 ACS  
AN 1983:221787 HCAPLUS  
DN 98:221787  
TI Comparison of complexes with  $^{99m}\text{Tc}$  and  $^{99}\text{Tc}$  using paper chromatography  
AU Blaeuenstein, P.; Girgenrath, K.; Gasche, W.  
CS Swiss Fed. Inst. React. Res., Wuerenlingen, CH-5303, Switz.  
SO Anal. Chem. Symp. Ser. (1983), 13(Chromatogr. Biochem., Med. Environ. Res. 1), 199-201  
CODEN: ACSSDR; ISSN: 0167-6350.  
DT Journal  
LA English  
AB The rate of complex formation of  $^{99}\text{Tc}$  and  $^{99m}\text{Tc}$  was studied by paper chromatog. using  $\text{MeCN-H}_2\text{O}$  (2.5:1) as elution agent. Both isomers form the same products, but  $^{99m}\text{Tc}$  produces a significant acceleration of the reaction. Changes in the reducing agent influences the redn. rate but not the product formed. The redn. rate increased in the order  $\text{HSO}_3^- < \text{Sn} < \text{SnCl}_2$ . Investigation of com. DTPA-, EDTA-, and NTA-kits indicates slow complex formation but rapid redn. of  $^{99m}\text{TcO}_4^-$ . Although x-ray anal. of Tc-NTA complex was not completed, elemental anal. indicate the formula  $\text{K}_2[\text{Tc}_2\text{O}_2(\text{NTA})_2]$ .



=&gt; d bib abs 175 11

L75 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2001 ACS

AN 1982:412562 HCAPLUS

DN 97:12562

TI Fibrous activated carbon loaded with metal-aminopolycarboxylic acid  
chelate as an ozone decomposition catalyst

PA Toho Beslon Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57059635	A2	19820410	JP 1980-135253	19800930
AB	Fibrous activated C of sp. surface area 300-2000 m <sup>2</sup> /g, C <sub>6</sub> H <sub>6</sub> adsorption rate const. .gtoreq.0.2/min, strength .gtoreq.15 kg/mm <sup>2</sup> , and diam. 3-25 .mu. is loaded with 0.01-20% metal aminopolycarboxylate, the metal being Cu, Ag, Zn, Cd, Cr, Mn, Co, Ni, Pd, or Fe. Thus, 90:10 acrylonitrile-Me acrylate fiber was made flame-resistant in air at 230-50.degree. for 6 h with strain to give 20% shrinkage and activated at 900.degree. for 10 h in steam. The activated C(1200 m <sup>2</sup> /g. 0.6/min, 25 kg/mm <sup>2</sup> , and 5 .mu., resp.) was soaked in 100 vols. of 0.8% aq. Cu-EDTA for 30 min, dried at 100.degree. for 1 h to be loaded with 2% Cu-EDTA, and a 0.05 g portion was filled in a 35 mm glass tube in 0.03 g/mL filling d. when air contg. 2 ppm O <sub>3</sub> was passed over at 0.023 m <sup>3</sup> /min, O <sub>3</sub> decompn. was 100 % after 50.				

=&gt; d bib abs 175 12

L75 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2001 ACS  
AN 1982:82004 HCAPLUS  
DN 96:82004  
TI Technetium-99m complexes of EDTA analogs: studies of the radiochemistry and biodistribution  
AU Baker, Richmond J.; Diamanti, Carol I.; Goodwin, David A.; Meares, Claude F.  
CS VA Hosp., Palo Alto, CA, USA  
SO Int. J. Nucl. Med. Biol. (1981), 8(2-3), 159-69  
CODEN: IJNMCI; ISSN: 0047-0740  
DT Journal  
LA English  
AB The prepn. of 99mTc aminopolycarboxylate complexes was carried out under anaerobic conditions using Sn ions as the reducing agent. Electrophoresis and TLC were used for anal., showing that DTPA, EDTA, and 1-methyl-EDTA preps. contained most of the 99mTc radioactivity in the chelate form. Kinetics studies showed that binding to 1-phenyl-EDTA was slow. All compds. migrated towards the anode on electrophoresis, enabling sepn. from free TcO4- and reduced 99mTc. Quant. distribution studies in mice and computerized renograms in rabbits showed that renal clearance was the main excretory route, but all compds. were cleared more slowly than [131I]hippuran. The presence of the lipophilic Ph group in the EDTA mol. produced excretion partially by the binary route. These complexes belong to a series of bifunctional chelates which has the potential to produce new 99mTc-radiopharmaceuticals having the in vivo stability of 99mTc-EDTA.

=> d bib abs 175 13

L75 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2001 ACS  
AN 1973:31849 HCAPLUS  
DN 78:31849  
TI Denture cleansers  
IN Hill, William H.  
PA Strong, Peter, and Co. Inc.  
SO U.S., 5 pp. Continuation-in-part of U.S. 3,488,288 (CA 72;82984x).  
CODEN: USXXAM  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3704227	A	19721128	US 1969-878562	19691120
AB	The efficiency of oxygen gassing in conventional powd. denture cleansers was improved by replacement of the activating agent or catalyst with .1eq.5% of a stoichiometric chelate of EDTA with Co, Cu, Fe, Mn, or Ni.				

=> d bib abs 175 14

L75 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2001 ACS  
AN 1971:7146 HCAPLUS  
DN 74:7146  
TI New complexanes. XIX. Complex-forming properties of the  
ethylenediamine-N,N'-diacetic-N,N'-(2,2'-dialkanecarboxylic) acids  
AU Novak, Vladimir; Dvorakova, E.; Svicekova, Maria; Majer, Jaroslav  
CS Fac. Pharm., Komensky Univ., Bratislava, Czech.  
SO Chem. Zvesti (1969), 23(11-12), 861-8  
CODEN: CHZVAN  
DT Journal  
LA English  
AB The dissozn. consts. of 3 complexanes of the title acids (in which  
dialkanecarboxylic includes dibutyric, divaleric, and diisovaleric), and  
the stability consts. of their chelates with 24 central atoms (Group II  
and rare earth elements and Pb, Zn, Co, Mn) were detd. at  
20.degree.. The stability consts. decreased with increasing no. of C  
atoms, but increased with increasing at. no. of the complex central atom.

CEPERLEY 09/576,960

=&gt; d his

(FILE 'HOME' ENTERED AT 09:49:45 ON 13 MAR 2001)

FILE 'REGISTRY' ENTERED AT 09:50:52 ON 13 MAR 2001

E SNCL2/CN  
E SNCL2/MF  
E STANNOUS CHLORIDE/CN  
L1 2 S E3, E6 SnCl<sub>2</sub> & SnCl<sub>2</sub>·2H<sub>2</sub>O  
E STANNOUS FLUORIDE/CN  
L2 2 S E3-5  
E STANNOUS BROMIDE/CN  
L3 1 S E3  
E STANNOUS IODIDE/CN  
L4 1 S E3  
L5 1 S E4 - stannous ion  
E STANNOUS SULFATE/CN  
L6 1 S E3  
L7 1 S PYROPHOSPHATE/CN  
L8 1 S GLUCEPTATE/CN  
L9 1 S CARBON MONOXIDE/CN  
E CL2 SN . H2 O/MF  
L10 1 S E3 ← Cl<sub>2</sub> mono hydrate

FILE 'HCAPLUS' ENTERED AT 09:57:42 ON 13 MAR 2001

L11 752 S L5 Sn<sup>2+</sup> ion  
L12 8221 S L1-4 OR L6 OR L10 Sn cpds  
L13 94393 S L9 CO  
L14 27553 S LYOPHIL? OR FREEZE(2W)(DRY? OR DRIED)  
L15 0 S L14(L)L11  
L16 10 S L14 AND L11  
L17 12 S L12(L)L14  
L18 63 S L12 AND L14  
L19 0 S L16-18 AND L9  
L20 0 S L16-18 AND MONOXIDE  
L21 0 S L16-18 AND HEADSPACE  
L22 39 S L16-18 AND (KIT OR CONTAINER OR VIAL)  
L23 1 S L22 AND GAS  
L24 0 S L22 AND ?MONOX?

FILE 'REGISTRY' ENTERED AT 10:04:48 ON 13 MAR 2001

FILE 'HCAPLUS' ENTERED AT 10:05:20 ON 13 MAR 2001

L25 73 S L8  
L26 2466 S L7  
L27 30427 S LACTOSE  
L28 2 S L22 AND L25-27  
L29 552235 S TC OR RE OR MN OR MANGANESE OR TECHNETIUM OR RHENIUM OR PERTE  
L30 2 S L28 AND L29 2 cites  
L31 37 S L22 NOT L30 37 cites > Cl 18 i 22  
L32 36 S L13 AND L14  
L33 5 S L32 AND L29  
L34 5 S L33 NOT L22 5 cites  
L35 0 S L34 AND (SN OR TIN OR STANNOUS)  
L36 0 S L35 AND (KIT OR CONTAINER OR VIAL)  
L37 0 S L35 AND STORAGE  
L38 60 S L13 AND HEADSPACE  
L39 0 S L38 AND L29  
L40 0 S L38 AND L11-12  
L41 3 S L38 AND (SN OR TIN OR STANNOUS) 3 cites - lyophilization w/ CO

FILE 'REGISTRY' ENTERED AT 10:25:53 ON 13 MAR 2001

L42 374 S (TC OR RE)/ELS AND SN/ELS  
L43 7648 S (TC OR RE OR MN)/ELS AND SN/ELS > claim 27 cpds

FILE 'HCAPLUS' ENTERED AT 10:26:38 ON 13 MAR 2001

L44 230 S L42  
L45 11959 S L43  
L46 1070 S AMINOPOLYCARBOX?  
L47 0 S L45 AND L46  
L48 0 S L45(L)L14  
L49 4 S L45 AND L14 w/ ligands (L46) Cl 30-42

FILE 'USPATFULL' ENTERED AT 10:30:35 ON 13 MAR 2001

L50 45301 S LYOPHIL? OR FREEZE(2W)(DRY? OR DRIED)  
L51 1146 S L1-4 OR L6 OR L10

SEARCHED BY SUSAN HANLEY 305-4053

Page 1

L52	5174	S	L9	
L53	397145	S	TC OR RE OR MN OR MANGANESE OR TECHNETIUM OR RHENIUM OR PERTE	
L54	42	S	L50 AND L52	
L55	0	S	L54 AND L51	
L56	8	S	L54 AND (SN OR TIN OR STANNOUS)	
L57	31	S	L54 AND L53	
L58	6	S	L56 AND L57	
L59	1	S	L58 AND (KIT OR CONTAINER OR VIAL)	1 patent
L60	52	S	(VIAL OR CONTAINER OR HEADSPACE)(SA) MONOXIDE	
L61	18	S	L53 AND L60	
L62	0	S	L61 AND (L51 OR SN OR TIN OR STANNOUS)	
L63	6	S	L60 AND (L51 OR SN OR TIN OR STANNOUS)	# 3/6 is given (column
L64	0	S	L53(SA)L60	not relevant)
L65	0	S	L54 AND L60	
L66	16	S	L53(L)L60	
L67	2	S	L53(P)L60	

In USPAT FILE, I concentrated on the CO aspect  
of the invention — not much around

=&gt; d bib abs hitstr 131 4

L31 ANSWER 4 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 2000:114380 HCAPLUS  
 DN 132:171107  
 TI Lyophilized imaging agent formulation comprising a chemotactic peptide  
 IN Corbo, Diane C.; Link, Mary Jean M.; Williams, N. Adeyinka; Tomsho, Michelle L.; Bornstein, Michael; Solomon, Howard F.; Larsen, Scott K.; Suddith, Robert L.  
 PA Ortho Pharmaceutical Corp., USA; Johnson-Matthey Inc.  
 SO U.S., 25 pp., Division of U.S. Ser. No. 271,818, abandoned.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6024938	A	20000215	US 1997-997894	19971224
PRAI	US 1994-271818		19940707		
AB	A lyophilized imaging agent formulation comprises a targeting mol. such as antibody or chemotactic peptide, a linker such as diethylenetriaminepentaacetic acid (DTPA) or succinimidyl 6-hydrazinium nicotinate-HCl (SHNH), drying protectant such as mannitol, maltose or tricine, and excipient such as Polysorbate 80, in citrate buffer. The formulations are lyophilized and may be stored for extended periods of time. Following reconstitution with a diluent, the formulations are administered to a subject for scintigraphic imaging or therapeutic use. Also contemplated is a kit comprising a 2-vial system wherein a first vial comprises a lyophilized formulation of imaging agent in the form of a lyophilized cake, and a second vial comprises a carrier or diluent. The DTPA-IgG imaging agent was lyophilized in accordance with the following protocol. One-half (0.5) mL of a 4 mg/mL imaging agent formulation (DTPA-IgG) contg. saline 0.9, maltose 5, and Polysorbate-80 0.04% and pH 4.5 citrate buffer (80 mM) was lyophilized. The formulation was placed in a glass vial and the vial held in the lyophilizer at 5.degree. for one-half hour, after which time the temp. was ramped-down over 9 h to -50.degree.. The lyophilized vial was reconstituted with 2.0 mL 0.9% saline and the final formulation contained imaging agent 1 mg/mL in 20 mM citrate buffer, 1.25% maltose, 0.9% saline and 0.01% Polysorbate-80 at pH 4.5.				
IT	7772-99-8, Tin chloride (SnCl2), biological studies RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (lyophilized imaging agent formulation comprising chemotactic peptide)				
RN	7772-99-8 HCAPLUS				
CN	Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)				

Cl-Sn-Cl

RE.CNT 45

RE  
 (1) Abrams, M; J Nucl Med 1990, V31(12), P2022 HCAPLUS  
 (2) Anon; EP 0314317 A1 1989 HCAPLUS  
 (3) Anon; WO 8911297 1989 HCAPLUS  
 (4) Anon; WO 9104056 1991 HCAPLUS  
 (5) Borrebaeck, C; J Immunol Meth 1989, V123, P157 HCAPLUS  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs hitstr 131 5

L31 ANSWER 5 OF 37 HCAPLUS COPYRIGHT 2001 ACS

AN 1999:763693 HCAPLUS

DN 132:6403

TI Kit for the single step preparation of pentavalent technetium

99mTc(V)-DMSA

IN Efstratios, Chiotellis

PA N.C.S.R. "Demokritos"-Institut of Radioisotopes and Radiodiagnostic

Products, Greece

SO Eur. Pat. Appl., 7 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 960623	A2	19991201	EP 1999-600002	19990113
	EP 960623	A3	20000308		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRAI GR 1998-100018 19980113

AB Technetium 99m (V)-dimercaptosuccinic acid (DMSA) is a diagnostic imaging agent with clin. application in the diagnosis of myeloid thyroid carcinoma, of bone and soft tissue tumors and breast tumors. Furthermore, significant retention in bone metastases has been reported. The invention concerns a standardized formulation of a freeze-dried kit for the single-step prepn. of the radiopharmaceutical pentavalent technetium-99mTc(V)-dimercaptosuccinic acid only by the reconstitution of the freeze-dried kit content by adding an appropriate vol. of injectable soln. of sodium pertechnetate-99mTc. Consequently, the kit formulation is developed to contain all necessary constituents in a stable in vitro compn. which enables the kit storage for three months. The vial content - lyophilized dry powder - is sterile and pyrogen free. The method of the kit prepn. comprises the mixt. of two DMSA solns. (A and B) of different compns. and acidity. The final soln. is prepd. by adding soln. B to soln. A; Lyophilization is taking place at zero degree.C for 24 h, whereas vials are sealed inside the lyophilization chamber under dried and sterile nitrogen 99.999% pure. The whole procedure must be run under aseptic conditions. The cold kit should be stored in the freezer. The kit labeling with technetium-99m is achieved with the reconstitution or total dissoln. of the kit content by adding 2.5 mL of sodium pertechnetate-Tc99m injectable soln. of total radioactivity between 0.74 - 2.96 GBq (20-80 mCi). The method of labeling is therefore performed simultaneously with the kit reconstitution. Therefore the prepn. of the pentavalent technetium 99m(V)-dimercaptosuccinic acid is a very simple procedure, easy-to-use, efficient and pharmaceutically safe. The prepd. soln. of pentavalent technetium 99m(V)- dimercaptosuccinic acid may be used for 2.5 h after labeling when kept in the refrigerator (preservation conditions) conforming to the rules of protection against radiation.

IT 7772-99-8, Stannous chloride, biological studies

RL: CAT (Catalyst use); THU (Therapeutic use); BIOL (Biological study);

USES (Uses)

(kit for the single step prepn. of pentavalent technetium

99mTc(V)-DMSA)

RN 7772-99-8 HCAPLUS

CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl



=&gt; d bib abs hitstr 131 10

L31 ANSWER 10 OF 37 HCAPLUS COPYRIGHT 2001 ACS

AN 1998:600374 HCAPLUS

DN 129:172518

TI Process for preparing a radiodiagnostic agent for bone scintigraphy

IN Budsky, Frantisek; Kopecky, Petr; Prokop, Jiri

PA Ustav Jaderneho Vyzkumu Rez A.S., Czech Rep.

SO Czech Rep., 13 pp.

CODEN: CZXXED

DT Patent

LA Czech

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CZ 283251	B6	19980218	CZ 1995-1780	19950711
AB	Diethylenetriamino-N,N,N',N',N'-pentakis(methylenephosphonic) acid (I) was prepd. by the reaction of diethylenetriamine trihydrochloride (prepd. from diethylenetriamine in abs. methanol with azeotropic HCl) with formaldehyde and orthophosphorous (phosphonic) acid. Its monocalcium trisodium salt of I was then prepd. by reaction with CaCO <sub>3</sub> and NaOH. The following salt reaction with tin chloride (SnCl <sub>2</sub> ) yielded a Sn <sup>2+</sup> complex that was subsequently lyophilized in vials and mixed with eluate from the technetium 99mTc generator. Vials with 15-25 .mu.mol of I equiv. were mixed with 0.25-0.5 mL eluate contg. 250-2500 MBq 99mTc. The vial content when dissolved for use contains the labeled product which is stable at least for 5 h. The control assay for I content in vials used Dowex 50 removal of Ca and Sn and subsequent complexometric titrn. of I with ZnSO <sub>4</sub> in ammonia/NH <sub>4</sub> Cl buffer with the Eriochrome Black T indicator. The tissue distribution of the agent radioactivity was detd. in rats at 1, 2, and 4 h after administration.				
IT	7772-99-8, Tin chloride, reactions				
	RL: RCT (Reactant)				
	(diethylenetriamino-N,N,N',N',N'-pentakis(methylenephosphonic) acid 99mTc radiodiagnostic agent prepn. for bone scintigraphy)				
RN	7772-99-8 HCAPLUS				
CN	Tin chloride (SnCl <sub>2</sub> ) (8CI, 9CI) (CA INDEX NAME)				

Cl-Sn-Cl

=&gt; d bib abs hitstr 131 11

L31 ANSWER 11 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1998:391059 HCAPLUS  
 DN 129:166124  
 TI Catalytic protection of stannous ion by ascorbic acid in diphosphonic acids solutions  
 AU Liu, Guo-Zheng; Liu, Fei; Miao, Zeng-Xing; Wang, Yi-Shan; Fang, Ji-Dong  
 CS Isotope Department, China Institute of Atomic Energy, Beijing, 102413, Peop. Rep. China  
 SO Nucl. Sci. Tech. (1998), 9(2), 121-123  
 CODEN: NSETEC; ISSN: 1001-8042  
 PB Science Press  
 DT Journal  
 LA English  
 AB The protective ability of ascorbic acid (Vc) on stannous ion and the influence of light irradiation on the stability of stannous ion in diphosphonate medium at pH=5 have been examined in order to attain minimal loss of stannous ion during the production of lyophilized radiopharmaceutical kits. The sum of stannous ion and Vc was determined with iodometric method. It was shown that the protective ability of Vc was still strong at Vc concentration much lower than that of stannous ion and the illumination by fluorescent lamp was unfavorable to the stability of stannous ion. The change of pH in the range 3.0-9.0 did not affect the action of Vc significantly.  
 IT 22541-90-8, Stannous ion, uses  
 RL: CAT (Catalyst use); PRP (Properties); USES (Uses)  
 (catalytic protection of stannous ion by ascorbic acid in diphosphonic acids solutions.)  
 RN 22541-90-8 HCAPLUS  
 CN Tin, ion (Sn<sup>2+</sup>) (8CI, 9CI) (CA INDEX NAME)

Sn<sup>2+</sup>

=&gt; d bib abs hitstr 131 13

L31 ANSWER 13 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1998:226759 HCAPLUS  
 DN 128:286376  
 TI Radio-labeled pharmaceutical liposome compositions and kits  
 IN Shinkarenko, Leonid Lurya  
 PA Lipogenics Ltd., Israel  
 SO U.S., 6 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5738868	A	19980414	US 1995-503662	19950718
AB	A method for prepg. a radio-labeled liposome, the method including the steps of at least once dehydrating and rehydrating a treated liposome to form a binding liposome, and adding a radio label to said binding liposome to form the radio-labeled liposome. To 10 mL of a soln. of 10 mg/mL dilauroyl phosphatidylcholine in chloroform was added 10 mL water and the mixt. was stirred to obtain a suspension. The chloroform was then removed and replace with water, then 5 mL of a soln of 1.0 mg/mL stannous chloride was added to the liposome suspension and stirred for 10 min then lyophilized. To 5 mg of this treated liposome powder was added 1-2 mL 0.9% sodium chloride soln. under vacuum and the resulting mixt. followed by addn. of 30 mCi of sodium pertechnetate and the resulting mixt. incubated at room temp for 10-30 min. Between 90-95% binding efficiency was obtained.				
IT	7772-99-8, Stannous chloride, reactions				
	RL: RCT (Reactant)				
	(radio-labeled pharmaceutical liposome compns. and kits)				
RN	7772-99-8 HCAPLUS				
CN	Tin chloride (SnCl <sub>2</sub> ) (8CI, 9CI) (CA INDEX NAME)				

CEPERLEY 09/576,960

Cl-Sn-Cl

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=&gt; d bib abs hitstr l31 14

L31 ANSWER 14 OF 37 HCAPLUS COPYRIGHT 2001 ACS

AN 1997:619167 HCAPLUS

DN 127:311470

TI Solid compositions containing new quinolones and reducing agents for radioimaging of inflammation due to bacterial infection

IN Sakuragi, Naoko; Kurokawa, Masahiro; Kadoki, Junko; Hatsushiba, Kiyonori; Yamaguchi, Toshiro

PA Daiichi Radioisotope Laboratories, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09243637	A2	19970919	JP 1996-70869	19960304
AB	The compns. contain quinolone compds., preferably levofloxacin, and reducing agents, preferably SnCl <sub>2</sub> . The compns. are labeled with radioactive metals, e.g. <sup>99m</sup> Tc, just before the use. A HCl soln. of SnCl <sub>2</sub> was mixed with an aq. soln. of levofloxacin and the soln. was frozen in a vial. The vial was thawed and the content was treated with <sup>99m</sup> Tc-pertechnetate to give a <sup>99m</sup> Tc-labeled imaging agent. The agent was injected into a rat i.m. infected with Escherichia coli at the right thigh to give a pos. image at the inflammatory site of the right thigh.				
IT	7772-99-8, Stannous chloride, biological studies				
	RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)				
	(easily-labeled solid compn. contg. new quinolones and reducing agents for radioimaging of inflammation due to bacterial infection)				
RN	7772-99-8 HCAPLUS				
CN	Tin chloride (SnCl <sub>2</sub> ) (8CI, 9CI) (CA INDEX NAME)				

Cl- Sn- Cl

=&gt; d bib abs hitstr 131 15

L31 ANSWER 15 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1997:345978 HCAPLUS  
 DN 127:39662  
 TI Development of a stable single-vial formulation for a new technetium complex using bilayer lyophilization  
 AU Haby, Thomas; Thakur, Ajit; Nowotnik, David; Chan, Yee Wai; Linder, Karen; Varia, Sailesh  
 CS Bristol-Myers Squibb Pharmaceutical Research Institute, New Brunswick, NJ, USA  
 SO PDA J. Pharm. Sci. Technol. (1997), 51(2), 68-71  
 CODEN: JPHTEU; ISSN: 1076-397X  
 PB PDA, Inc.  
 DT Journal  
 LA English  
 AB The interaction between different components used in the prepn. of a new radiodiagnostic agent, BMS-181321, was overcome by its lyophilization as a bilayered product. BMS-181321 is composed of a nitroimidazole ligand BMS-181032, that is complexed with technetium-99m just before it is used in radionuclide imaging studies. Stannous chloride is required to reduce technetium from the +7 to the +5 oxidn. state before it can be complexed by the ligand. Because BMS-181032 is unstable in the presence of stannous chloride (when mixed in the liq. or solid state), the two components must be contained in sep. vials. A bilayered lyophile was manufd., contg. the ligand and stannous chloride in sep. layers in a single vial. The bilayered product was manufd. by first filling a soln. of the ligand into a vial and freezing the soln. A soln. contg. stannous chloride was then filled into the same vial on top of the frozen layer of ligand, and this second layer was also frozen. The two frozen layers were then lyophilized to a dry solid cake. The resulting bilayered product showed stability comparable to that seen when the ligand and the reducing agent were contained in sep. vials. The sepn. provided by the layering was sufficient to prevent any significant interaction between the reducing agent and the ligand.  
 IT 7772-99-8, Stannous chloride, reactions  
 RL: RCT (Reactant)  
 (development of stable single-vial formulation for new technetium complex using bilayer lyophilization)  
 RN 7772-99-8 HCAPLUS  
 CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

=&gt; d bib abs hitstr 131 16

L31 ANSWER 16 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1997:211786 HCAPLUS  
 DN 126:274207  
 TI Study on the lyophilized product of  $^{186}\text{Re}(\text{Sn})$ -HEDP kit  
 AU Bai, Hongsheng; Jin; Xiaohai; Wang, Fan; Du, Jin; Liu, Yuemin; Chen, Daming; Xu, Hailin  
 CS China Institute of Atomic Energy, Beijing, 102413, Peop. Rep. China  
 SO Tongweisu (1996), 9(4), 207-212  
 CODEN: TONGEM; ISSN: 1000-7512  
 PB Yuanzineng Chubanshe  
 DT Journal  
 LA Chinese  
 AB The prepn. of the frozen and dried product of  $^{186}\text{Re}(\text{Sn})$ -HEDP kit was introduced, and the effective quantities of the components (HEDP, vitamin C and  $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ ) in the kit were detd. At the same time, the effects of reaction time, temp. on the labeling efficiency and animal distribution were systematically studied. The initial animal expts. showed high uptake in the skeletal tissue and quick clearance in the blood.  
 IT 10025-69-1, Stannous dichloride dihydrate  
 RL: MSC (Miscellaneous)  
 (lyophilized product of  $^{186}\text{Re}(\text{Sn})$ -HEDP kit)  
 RN 10025-69-1 HCAPLUS  
 CN Tin chloride ( $\text{SnCl}_2$ ), dihydrate (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

●2 H<sub>2</sub>O

=&gt; d bib abs hitstr 131 17

L31 ANSWER 17 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1996:634940 HCAPLUS  
 DN 125:257188  
 TI Stable multilayer lyophile comprising a radioligand and a  
 compound which is chemically incompatible with the radioligand  
 IN Nowotnik, David P.  
 PA Bracco International B.V., Neth.  
 SO S. African, 21 pp.  
 CODEN: SFXAB  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	ZA 9409107	A	19950804	ZA 1994-9107	19941116
	AU 9510335	A1	19950703	AU 1995-10335	19941205
PRAI	US 1993-168100		19931214		
	WO 1994-IB390		19941205		

AB A stable multilayer lyophile comprising at least two layers, a first layer comprising a radioligand and a second layer comprising at least one component which is chem. incompatible with the radioligand in the first layer. Thus, 3,3,9,9-tetramethyl-1-(2-nitro-1H-imidazol-1-yl)-4,8-diazaundecane-2,10-dionedioxime was synthesized from N-(dimethylallyl)2-nitroimidazole (I) by a series of steps. A 2mL soln. contg. 2 mg of the radioligand I and 50 mg sulfated .beta.-cyclodextrin was filled into a vial and freeze-dried for 1 h at -50.degree.. A second layer (0.2 mL) contg. 0.025 mg SnCl<sub>2</sub>.2H<sub>2</sub>O and 0.5 mg CaNa<sub>3</sub>DTPA.3H<sub>2</sub>O was added on top of the first frozen layer and the vial was returned to -50.degree. and the bilayer product was then dried using a 60 h lyophilization cycle.

IT 10025-69-1, Stannous chloride dihydrate  
 RL: RCT (Reactant)  
 (stable multilayer lyophile comprising radioligand and compd. which is chem. incompatible with radioligand)

RN 10025-69-1 HCAPLUS  
 CN Tin chloride (SnCl<sub>2</sub>), dihydrate (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

● 2 H2O

IT 7783-47-3, Stannous fluoride 10031-24-0, Stannous bromide  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (stable multilayer lyophile comprising radioligand and compd. which is chem. incompatible with radioligand)

RN 7783-47-3 HCAPLUS  
 CN Tin fluoride (SnF<sub>2</sub>) (8CI, 9CI) (CA INDEX NAME)

F-Sn-F

RN 10031-24-0 HCAPLUS  
 CN Tin bromide (SnBr<sub>2</sub>) (6CI, 8CI, 9CI) (CA INDEX NAME)

Br-Sn-Br



=&gt; d bib abs hitstr 131 18

L31 ANSWER 18 OF 37 HCAPLUS COPYRIGHT 2001 ACS

AN 1996:38839 HCAPLUS

DN 124:66656

TI Method for production of radiolabeled drug product containing stannous salts

IN Dansereau, Raymond N.; Line, Bruce R.

PA Albany Medical College, USA

SO PCT Int. Appl., 19 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9530443	A1	19951116	WO 1995-US5085	19950503

W: CA, JP

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRAI US 1994-238467 19940505

AB A method for producing a radiolabeled drug prodrug which utilizes sterile drug ligand, sterile stannous ion, and sterile radiolabel to assure the suitability of the radiolabeled drug for in vivo usage is provided. Thus, 10 mg of dextran-70 was mixed with 0.33 mL of 0.9% NaCl injection and the soln. was added to Ultratag RBC (contg. tin chloride dihydrate 105 .mu.g max., Na citrate.2H2O 3.67 mg, and dextrose anhyd. 5.50 mg) in a lyophilized form and stored upon argon. To the content of the vial was added 1.48 Gbq Technetium 99m sodium pertechnetate and mixed and incubated at 22.degree. for 15 min. The in vivo stability of the product was shown in human subjects.

IT 7772-99-8, Stannous chloride, reactions 7783-47-3,

Stannous fluoride

RL: RCT (Reactant)

(method for prodn. of radiolabeled drug product contg. stannous salts)

RN 7772-99-8 HCAPLUS

CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

RN 7783-47-3 HCAPLUS

CN Tin fluoride (SnF2) (8CI, 9CI) (CA INDEX NAME)

F-Sn-F

=&gt; d bib abs hitstr 131 19

L31 ANSWER 19 OF 37 HCAPLUS COPYRIGHT 2001 ACS

AN 1993:546611 HCAPLUS

DN 119:146611

TI Tumor imaging agent containing technetium compound

IN Pandian, Steve

PA USA

SO PCT Int. Appl., 11 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9313800	A1	19930722	WO 1993-US670	19930112
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9335921	A1	19930803	AU 1993-35921	19930112
PRAI	US 1992-821475		19920114		
	WO 1993-US670		19930112		
AB	A radiochem. for detecting all types of tumors with a .gamma.-camera, comprises Me glyoxal bis(guanyl hydrazone) (I), SnCl <sub>2</sub> .cntdot.2H <sub>2</sub> O (II), and <sup>99m</sup> TcO <sub>4</sub> <sup>-</sup> . A kit contg. freeze-dried I and II in a vial is also disclosed.				
IT	10025-69-1, Stannous chloride dihydrate				
	RL: BIOL (Biological study)				
	(tumor imaging agent contg.)				
RN	10025-69-1 HCAPLUS				
CN	Tin chloride (SnCl <sub>2</sub> ), dihydrate (8CI, 9CI) (CA INDEX NAME)				

C1-Sn-C1

●2 H<sub>2</sub>O

=&gt; d bib abs hitstr 131 20

L31 ANSWER 20 OF 37 HCAPLUS COPYRIGHT 2001 ACS

AN 1991:578869 HCAPLUS

DN 115:178869

TI Two-component kit with nonradioactive precursor for the preparation of an enantiomeric form of the liver function diagnostic agent, technetium-99m-labeled mercaptoacetyltriglycine

IN Noll, Bernhard; Johannsen, Bernd; Muenze, Rudolph; Spies, Hartmut

PA Zentralinstitut fuer Kernforschung Rossendorf, Fed. Rep. Ger.

SO Eur. Pat. Appl., 4 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 427360	A2	19910515	EP 1990-250271	19901023
	EP 427360	A3	19910605		
	EP 427360	B1	19940615		
	R: AT, DE, FR, GR, IT, NL				
	DD 288751	A5	19910411	DD 1989-334034	19891030
	DD 288751	B5	19940721		
	DD 288752	A5	19910411	DD 1989-334035	19891030
	DD 288752	B5	19940609		
	HU 58920	A2	19920330	HU 1990-6944	19901030
	HU 206774	B	19921228		
	CZ 278025	B6	19930317	CZ 1990-5316	19901030
	SK 277878	B6	19950607	SK 1990-5316	19901030
PRAI	DD 1989-334034		19891030		
	DD 1989-334035		19891030		

AB The 1st kit component comprises a lyophilized mixt. of mercaptoacetyltriglycine (MAG-3), a coligand which stabilizes the oxidn. stage +5 of Tc, a reducing agent, and an alkali metal or alk.-earth metal hydroxide. The coligand is a tartrate or gluconate. The 2nd kit component is a phosphate buffer soln., contg. acid corresponding to a molar ratio of MAG-3/hydroxide. MAG-3 was prepd. by sapon. of benzoyl-MAG-3 with NaOMe in MeOH. A kit was made, having as a 1st component a mixt. of MAG-3 0.2, di-Na tartrate-2H<sub>2</sub>O 22, NaOH 1.72 mg, and 60 .mu.g SnCl<sub>2</sub>.2H<sub>2</sub>O, and as the 2nd component a mixt. of 0.1M NaH<sub>2</sub>PO<sub>4</sub> 1.638, 0.1M NaH<sub>2</sub>PO<sub>4</sub> 0.382, and 1N HCl 0.04 mL. Prior to use, the 1st component was labeled with 99mTc reactor eluate and mixed with the 2nd component.

IT 7772-99-8, Tin(II) chloride, biological studies

RL: ANST (Analytical study)

(kit contg., for prepn. of metastable technetium-99-labeled diagnostic agent for kidney function detn.)

RN 7772-99-8 HCAPLUS

CN Tin chloride (SnCl<sub>2</sub>) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

=&gt; d bib abs hitstr 131 21

L31 ANSWER 21 OF 37 HCAPLUS COPYRIGHT 2001 ACS

AN 1991:554532 HCAPLUS

DN 115:154532

TI Direct radiolabeling of antibodies and other proteins with technetium or rhenium using tin disulfide bond reducing agent pretreatment

IN Rhodes, Buck A.

PA USA

SO PCT Int. Appl., 40 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 15

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9101754	A1	19910221	WO 1990-US4461	19900808
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE				
	US 5078985	A	19920107	US 1989-391474	19890809
	CA 2065299	AA	19910210	CA 1990-2065299	19900808
	AU 9065434	A1	19910311	AU 1990-65434	19900808
	AU 650629	B2	19940630		
	EP 486622	A1	19920527	EP 1990-915377	19900808
	EP 486622	B1	19981104		
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE				
	JP 05508699	T2	19931202	JP 1990-514313	19900808
	JP 3070763	B2	20000731		
	AT 172879	E	19981115	AT 1990-915377	19900808
	ES 2125854	T3	19990316	ES 1990-915377	19900808
	JP 2000053590	A2	20000222	JP 1999-227755	19900808
	US 35457	E	19970218	US 1995-389267	19950216

PRAI US 1989-391474 19890809

JP 1990-514313 19900808

US 1990-565275 19900808

WO 1990-US4461 19900808

AB Proteins contg. .gtoreq.1 disulfide bonds are radiolabeled with Tc or Re radionuclides by: (1) reacting the disulfide bonds of the protein with a Sn(II) reducing agent to form Sn(II)-contg. and S-contg. complexes and Sn(IV) reaction byproducts, while preventing excessive fragmentation of the protein; (2) removing excess reducing agent, redn. byproducts, and any impurities to obtain reduced protein; (3) adding radionuclide, e.g. 99Tc (or Re) in the form of Na pertechnetate or perrhenate and pertechnetate or perrhenate reducing agent to reduce the Na pertechnetate or perrhenate and facilitate the labeling by ligand exchange, with the addn. in such a manner that further redn. of the protein is limited. The resulting product is stable and can be stored frozen or lyophilized. A Sn(II) disulfide bond reducing agent prepd. by adding 0.5 mM SnCl2 to a soln. contg. 40 mM K biphthalate and 10 mM Na tartrate at pH 5.6 was mixed with a IgG prepn. and kept at room temp. in the dark for 21 h for partial redn. of disulfide bonds. The reaction mixt. was then passed through a desalting column to remove excess Sn(II), Sn(IV) and other salt, and the reduced and Sn(II)-complexed protein fraction was concd. and frozen. A Sn(II) pertechnetate reducing agent, prepd. by the same method as above, was added to the frozen antibody and frozen. Na pertechnetate-99mTc with 2.5 mCi radioactivity was then added to the reduced antibody and mixed at room temp. for labeling. Thin layer chromatog. revealed that 99.6% of the radioactivity was protein bound and HPLC showed that the 99mTc elution paralleled the protein elution profile.

IT 7772-99-8, Tin chloride (SnCl2), biological studies

RL: BIOL (Biological study)

(soln. contg. potassium biphthalate and sodium tartrate and, for reducing disulfide bond in protein for radioactive labeling)

RN 7772-99-8 HCAPLUS

CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

=> d bib abs hitstr 131 22

L31 ANSWER 22 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
AN 1988:566469 HCAPLUS  
DN 109:166469  
TI A new method for the preparation of technetium-99m - stannous colloid  
instant kit  
AU Chen, Shaoliang; Zhao, Huiyang  
CS Zhongshan Hosp., Shanghai Med. Univ., Shanghai, Peop. Rep. China  
SO Zhonghua Heyixue Zazhi (1988), 8(2), 90-1  
CODEN: CITCDE; ISSN: 0253-9780  
DT Journal  
LA Chinese  
AB For the prepn. of the title kit, NaF and SnCl<sub>2</sub> were dissolved in  
water, titrated to pH 6.4 with HCl, filtered, placed in vials,  
and lyophilized. It could be used immediately after <sup>99m</sup>TcO<sub>4</sub> was  
added. It was suitable for i.v. administration as an imaging agent for  
liver, spleen, and bone marrow. In rats, <sup>99m</sup>Tc-Sn colloid was rapidly  
removed from blood and accumulated in liver; it was also nontoxic to  
rabbits.  
IT 7772-99-8, Stannous chloride, biological studies  
RL: BIOL (Biological study)  
(in technetium-99m-tin colloid kit prepn., for scintigraphy)  
RN 7772-99-8 HCAPLUS  
CN Tin chloride (SnCl<sub>2</sub>) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

=&gt; d bib abs hitstr 131 23

L31 ANSWER 23 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1986:493726 HCAPLUS  
 DN 105:93726  
 TI Stable stannous chloride composition for labeling with radioactive technetium  
 IN Azuma, Makoto; Takahashi, Jun; Yamauchi, Hirohiko; Ueda, Nobuo  
 PA Nihon Medi-Physics Co., Ltd., Japan  
 SO Eur. Pat. Appl., 23 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 179481	A2	19860430	EP 1985-113555	19851024
	EP 179481	A3	19880302		
	EP 179481	B1	19911023		
	R: BE, CH, DE, FR, GB, IT, LI, NL				
	JP 61103841	A2	19860522	JP 1984-226395	19841026
	JP 05061256	B4	19930906		
	CA 1249514	A1	19890131	CA 1985-493739	19851024
	AU 8549064	A1	19860717	AU 1985-49064	19851025
	AU 583064	B2	19890420		
	US 4880616	A	19891114	US 1987-135527	19871217
	US 5015462	A	19910514	US 1989-362975	19890608
	US 5096693	A	19920317	US 1991-656202	19910215
PRAI	JP 1984-226395		19841026		
	US 1985-791474		19851025		
	US 1987-135527		19871217		
	US 1989-362975		19890608		

AB A stable, nonradioactive labeling compn. for prepn. of a  $^{99m}\text{Tc}$ -labeled radiodiagnostic agent comprises lyophilized  $\text{SnCl}_2$  obtained from a highly concd.  $\text{SnCl}_2$  soln. charged in a container under an inert gas. For example,  $\text{SnCl}_2$  (0.01 M) in  $\text{O}_2$ -free  $\text{H}_2\text{O}$  was lyophilized in a vial under  $\text{N}_2$  atm. and the lyophilized  $\text{SnCl}_2$  was dissolved in sterilized  $\text{O}_2$ -free  $\text{H}_2\text{O}$  followed by mixing with  $^{99m}\text{Tc}$  (as  $\text{Na}^{99m}\text{TcO}_4$ ) to obtain  $^{99m}\text{Tc}$ -labeled Sn colloid [ $\text{Tc}=(\text{FDSn-COL})$ ].  $\text{Tc}=(\text{FDSn-COL})$  exhibited an excellent distribution ability as a radioactive diagnostic agent in rats for liver scintigraphy by demonstrating >95% accumulation in the liver, whereas a  $^{99m}\text{Tc}$ -labeled radioactive compn. prepd. by using 0.002 M  $\text{SnCl}_2$  showed a lower accumulation in the liver with higher accumulation in other organs. The compn. was stable for 6 h and 200 days when stored at room temp and 3-6 degree., resp.

IT 7772-99-8P, preparation  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (lyophilized stable prepn. of, for labeling with metastable technetium-99)

RN 7772-99-8 HCAPLUS  
 CN Tin chloride ( $\text{SnCl}_2$ ) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

=&gt; d bib abs hitstr 131 24

L31 ANSWER 24 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1986:174642 HCAPLUS  
 DN 104:174642  
 TI Technetium-99m composition for labeling proteinaceous material  
 IN Sundrehagen, Erling  
 PA Institutt for Energiteknikk, Norway  
 SO PCT Int. Appl., 25 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8503231	A1	19850801	WO 1985-NO3	19850118
	W: DK, JP, NO				
	RW: AT, BE, CH, DE, FR, GB, NL, SE				
EP	169232	A1	19860129	EP 1985-900781	19850118
EP	169232	B1	19900425		
	R: AT, BE, CH, DE, FR, GB, LI, NL, SE				
JP	61501321	T2	19860703	JP 1985-500424	19850118
AT	52188	E	19900515	AT 1985-900781	19850118
ES	539738	A1	19861016	ES 1985-539738	19850122
DK	8504286	A	19850920	DK 1985-4286	19850920
NO	8503687	A	19850920	NO 1985-3687	19850920
	NO 163938	B	19900507		
	NO 163938	C	19900815		
PRAI	SE 1984-325		19840123		
	EP 1985-900781		19850118		
	WO 1985-NO3		19850118		

AB Igs, leukocytes, erythrocytes, platelets, and proteins can be labeled with <sup>99m</sup>Tc for scintigraphic diagnosis of inflammation, infection, graft rejection, thrombosis, or embolism by using preps. contg. pertechnetate-<sup>99m</sup>Tc, a Sn<sup>2+</sup> salt, an amino-, hydroxy-, or dihydroxybenzoic acid or salt to stabilize the Sn<sup>2+</sup>, and optionally a citrate or tartrate to minimize the formation of a <sup>99m</sup>Tc-Sn radiocolloid. Thus, a soln. of 5 mM 2,5-dihydroxybenzoic acid and 40 .mu.M Sn citrate was adjusted to neutral pH, sterilized by filtration, 0.5 mL was placed in vials and freeze-dried. Before use, the solids were dissolved in 0.5 mL pertechnetate <sup>99m</sup>Tc soln. in 0.9% saline obtained from a <sup>99m</sup>Tc/<sup>99m</sup>Mo generator. Granulocytes obtained from 50 mL blood were suspended in the soln. for 30 min, 2 mL plasma was added, and the suspension was centrifuged. The cells were suspended in 2 mL plasma for injection.

IT 7772-99-8, biological studies  
 RL: RCT (Reactant)  
 (redn. by, of pertechnetate-Tc-<sup>99m</sup> in presence of amino-, hydroxy-, or dihydroxybenzoic acids, in technetium-<sup>99m</sup> labeling of proteins and cells)  
 RN 7772-99-8 HCAPLUS  
 CN Tin chloride (SnCl<sub>2</sub>) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

IT 22541-90-8, biological studies  
 RL: RCT (Reactant)  
 (redn. by, of pertechnetate-Tc-<sup>99m</sup> in presence of amino-, hydroxy-, or dihydroxybenzoic acids, in technetium-<sup>99m</sup> labeling proteins and cells)  
 RN 22541-90-8 HCAPLUS  
 CN Tin, ion (Sn<sup>2+</sup>) (8CI, 9CI) (CA INDEX NAME)

Sn<sup>2+</sup>

=&gt; d bib abs hitstr 131 25

L31 ANSWER 25 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1985:154782 HCAPLUS  
 DN 102:154782  
 TI Preparation of technetium-99m-fibrinogen  
 AU Marcilio de Almeida, Maria Aparecida T.; Goncalves da Silva, Constancia Pagano  
 CS Inst. Pesq. Energ. Nucl., Sao Paulo, Brazil  
 SO Publ. IPEN (1984), IPEN-Pub-62, 10 pp.  
 CODEN: PUIPDL; ISSN: 0101-3084  
 DT Report  
 LA Portuguese  
 AB The 99mTc labeled fibrinogen was prepd. using SnCl<sub>2</sub> as a reducing agent for 99mTcO<sub>4</sub>. A sample of 20 mg of fibrinogen was dissolved in 2 mL pH 8 carbonate buffer and .03 mL 0.2% SnCl<sub>2</sub> was added. A sterile soln. of Na 99mTcO<sub>4</sub> eluted from a Mo - Tc generator was immediately added. The mixt. was allowed to stand for 30 min; the yield was .apprx.70%. The lyophilized kits also gave a yield of 70 g, thus being suitable for medical applications.  
 IT 7772-99-8, biological studies  
 RL: BIOL (Biological study)  
 (in prepn. of technetium-99m-fibrinogen complexes)  
 RN 7772-99-8 HCAPLUS  
 CN Tin chloride (SnCl<sub>2</sub>) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl



=&gt; d bib abs hitstr 131 26

L31 ANSWER 26 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1984:497713 HCAPLUS  
 DN 101:97713  
 TI Lyophilized radiographic imaging kit  
 IN Grogg, Terry Winton; Bugaj, Joseph Edward; Bates, Paul Edward  
 PA Mallinckrodt, Inc., USA  
 SO Eur. Pat. Appl., 38 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 111415	A2	19840620	EP 1983-307386	19831205
	EP 111415	A3	19850508		
	EP 111415	B1	19900418		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	US 4510125	A	19850409	US 1982-447863	19821208
	AT 52033	E	19900515	AT 1983-307386	19831205
	AU 8322179	A1	19840614	AU 1983-22179	19831207
	AU 562489	B2	19870611		
	JP 59112926	A2	19840629	JP 1983-229980	19831207
	JP 05082368	B4	19931118		
	ES 527890	A1	19841001	ES 1983-527890	19831207
	CA 1204662	A1	19860520	CA 1983-442701	19831207
PRAI	US 1982-447863		19821208		
	EP 1983-307386		19831205		
AB	A dry-powder imaging kit is produced by prepg. a stabilizer soln. contg. a gentisate, ascorbate or reductate, contacting the soln. with a metal such as Sn or Sn-contg. alloys and lyophilization. The dry powder is then mixed with (99mTc)pertechnetate saline soln. from a com. 99mTc source. Thus, a skeletal imaging kit was obtained from a mixt. of di-Na hydroxymethanediphosphonate 3.0, gentisic acid 0.84, NaCl 30.0, and SnCl2 0.032 mg and Sn 5.5 g/vial. The vial was sterilized and lyophilized and an imaging kit was prepd. by adding 5 mL (99mTc)pertechnetate with an activity of 75 mCi. About 1 mL of the agent is slowly injected into a human and skeletal images are obtained.				
IT	7772-99-8, biological studies 7783-47-3 RL: BIOL (Biological study) (radiodiagnostic imaging kits contg. technetium-99-phosphonate complexes and)				
RN	7772-99-8 HCAPLUS				
CN	Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)				

Cl-Sn-Cl

RN 7783-47-3 HCAPLUS  
 CN Tin fluoride (SnF2) (8CI, 9CI) (CA INDEX NAME)

F-Sn-F

=&gt; d bib abs hitstr 131 27

L31 ANSWER 27 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1982:168790 HCAPLUS  
 DN 96:168790  
 TI Method and reagent for making a radiopharmaceutical composition based on technetium-99m  
 IN Brockas, Anthony; Abrahams, Roy; Kelly, James Duncan  
 PA Amersham International Ltd., UK  
 SO Eur. Pat. Appl., 20 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 46067	A1	19820217	EP 1981-303608	19810806
	EP 46067	B1	19850130		
	R: DE, FR, GB, IT				
	US 4427647	A	19840124	US 1981-286752	19810727
	JP 57059816	A2	19820410	JP 1981-125139	19810810
PRAI	GB 1980-26198		19800812		
	GB 1981-14935		19810515		

AB A radiopharmaceutical compn. based on 99mTc is prepd. by mixing an aq. soln. of pertechnetate with a reducing agent consisting of Sn or stannous ion to reduce the pertechnetate and a complexing agent to form a complex with the reduced Tc. A nitrate and/or nitrite is incorporated in the compn. in an amt. to diminish the oxidn. of Sn<sup>2+</sup> to Sn<sup>4+</sup> during prepn. and storage of the complex. Bulk aq. solns. of methylene diphosphonate (I), SnF<sub>2</sub> and NaNO<sub>3</sub> were prepd. Aliquots were dispensed under N<sub>2</sub> into vials to provide the following amts., I 5, SnF<sub>2</sub> 0.34, NaNO<sub>3</sub> 1 mg. The vials were dispensed and freeze-dried and the % loss of Sn ion was 0. These vials were reconstituted by addn. of 8 mL of eluent saline from a Tc generator having an activity of 200 mCi. After storing these injection solns. for 6 h, and the concn. of Sn<sup>2+</sup> and pertechnetate were 6 .mu.g/mL and 0.1%, resp. Data for the biodistribution of these complexes are given.

IT 7783-47-3  
 RL: BIOL (Biological study)  
 (pertechnetate redn. with, for technetium-99 complexes prepn.)  
 RN 7783-47-3 HCAPLUS  
 CN Tin fluoride (SnF<sub>2</sub>) (8CI, 9CI) (CA INDEX NAME)

F-Sn-F

=&gt; d bib abs hitstr 131 28

L31 ANSWER 28 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1981:432328 HCAPLUS  
 DN 95:32328  
 TI Comparative examinations of  $^{99m}\text{Tc}$ -DMS preparations obtained by labeling  
 dimercaptosuccinate kits with different formulations. II.  
 Comparison of chemical and biological characteristics of TcP-5 and MPI  
 kits  
 AU Vanlic-Razumenic, N.  
 CS Lab. Radioisotopes, Boris Kidric Inst. Nucl. Sci., Vinca, 11000,  
 Yugoslavia  
 SO Nuklearmedizin (Stuttgart) (1981), 20(1), 46-9  
 CODEN: NMIMAX; ISSN: 0029-5566  
 DT Journal  
 LA English  
 AB The chem. and biol. characteristics of 2 dimercaptosuccinate kits  
 were examd. and compared: TcP-5 (produced at the Boris Kidric Institute -  
 Vinca) in the freeze-dried form and MPI - the aq.  
 soln. of Sn dimercaptosuccinate. The radiochem. compn. of the injection  
 solns. was examd. by various methods and the method of ascending paper  
 chromatog. in 50% aq. MeOH was found as satisfactory. Both preps. had  
 similar compns. Both preps. showed max. renal concns. 3-4 h after  
 injection. Liver uptake of MPI was higher than that of TcP-5. The  
 bench-life of both preps. was compared by measuring organ distribution.  
 TcP-5 had a bench-life of at least 6 h with a kidney/liver uptake ratio  
 from 5.60 to 8.52, whereas MPI had a satisfactory bench-life of <0.5 h  
 after labeling; thereafter, hepatic concn. rose and the kidney/liver  
 uptake ratio dropped to 1.64.  
 IT 7772-99-8, uses and miscellaneous  
 RL: PROC (Process)  
 (in freeze-dried technetium-99m-labeled  
 dimercaptosuccinate preps.)  
 RN 7772-99-8 HCAPLUS  
 CN Tin chloride ( $\text{SnCl}_2$ ) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

=&gt; d bib abs hitstr 131 29

L31 ANSWER 29 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1981:197538 HCAPLUS  
 DN 94:197538  
 TI Optimizing the conditions for 99mTc-labeling in the tin-dimercaptosuccinic acid kit  
 AU Kovacheva-Marinova, S.; Georgieva, R.; Pantev, T.; Sheiretova, E.  
 CS Med. Akad., Sofia, Bulg.  
 SO Rentgenol. Radiol. (1980), 19(4), 295-303  
 CODEN: RENRAR; ISSN: 0486-400X  
 DT Journal  
 LA Bulgarian  
 AB Optimum conditions for labeling of a Sn-dimercaptosuccinic acid complex with 99mTc to give a product with high renal incorporation rate were reconstitution of the freeze-dried complex of the kit with 2 mL Na99mTcO4 for 15 min under N protection and use within 30 days.  
 IT 7772-99-8, biological studies  
 RL: BIOL (Biological study)  
 (in technetium-99 dimercaptosuccinate complex prepn., for scintigraphy)  
 RN 7772-99-8 HCAPLUS  
 CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl- Sn- Cl

=> d bib abs hitstr 131 30

L31 ANSWER 30 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
AN 1981:197537 HCAPLUS  
DN 94:197537  
TI Synthesis of dimercaptosuccinic acid and development of a kit  
for labeling it with technetium-99m  
AU Kovacheva-Marinoва, S.; Georgieva, R.; Pantev, T.; Sheiretova, E.  
CS Med. Akad., Sofia, USSR  
SO Rentgenol. Radiol. (1980), 19(4), 286-94  
CODEN: RNRAR; ISSN: 0486-400X  
DT Journal  
LA Bulgarian  
AB Dimercaptosuccinic acid (I) [2418-14-6] was prepd. from dibromosuccinic  
acid [526-78-3] with Na<sub>2</sub>CS<sub>3</sub>, followed by neutralization with H<sub>2</sub>SO<sub>4</sub>. A  
kit was prepd. contg. freeze-dried I and SnCl<sub>2</sub>  
and Na<sup>99m</sup>TcO<sub>4</sub> soln. The reagent for scintigraphy was prepd. by mixing the  
freeze-dried I and SnCl<sub>2</sub> with the Na<sup>99m</sup>TcO<sub>4</sub>. The  
labeled complex had a pH of 3. Radioactivity accumulated in the kidneys  
of rabbits given i.v. injections from fresh kits, giving good  
visualization yet weak imaging of the liver and urinary bladder.  
IT 7772-99-8, biological studies  
RL: BIOL (Biological study)  
(in technetium-99 dimercaptosuccinate complex prepn., for scintigraphy)  
RN 7772-99-8 HCAPLUS  
CN Tin chloride (SnCl<sub>2</sub>) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

=&gt; d bib abs hitstr 131 31

L31 ANSWER 31 OF 37 HCAPLUS COPYRIGHT 2001 ACS

AN 1980:610320 HCAPLUS

DN 93:210320

TI Composition and method for labeling red blood cells with radioactive technetium: process and kit for preparing the composition

IN Kato, Makoto; Hazue, Masaaki

PA Nihon Medi-Physics Co., Ltd., Japan

SO Eur. Pat. Appl., 24 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 11301	A1	19800528	EP 1979-104536	19791116
	R: DE, FR, GB, NL, SE				
	JP 55069517	A2	19800526	JP 1978-143956	19781120
	JP 61026887	B4	19860623		
	US 4313928	A	19820202	US 1979-95789	19791119
	CA 1133812	A1	19821019	CA 1979-340133	19791119
PRAI	JP 1978-143956		19781120		

AB A nonradioactive compn. for intracorporeal labeling of red blood cells with  $^{99m}\text{Tc}$  comprises a pyridoxal, a  $\text{Sn}^{2+}$  salt, and .gtoreq.1 .alpha.-amino acid. The compn. is administered through a vein and assures efficient intracorporeal red blood cell labeling with  $^{99m}\text{Tc}$  which is subsequently administered through the vein. A compn. was prepd. contg. pyridoxal-HCl [65-22-5] 3665, anhyd.  $\text{SnCl}_2$  37.9, L-(+)-ascorbic acid (stabilizer) 70 mg in 100 mL  $\text{H}_2\text{O}$  to which was added L-isoleucine [73-32-5] 2361 mg/100 mL  $\text{H}_2\text{O}$  with NaOH 1440 mg. Administration of this soln. followed by administration of saline soln. of Na pertechnetate- $^{99m}\text{Tc}$  resulted in excellent intracorporeal labeling of red blood cells in rats. The nonradioactive compns. showed good stability in soln. and lyophilized form and low toxicity.

IT 7772-99-8, biological studies

RL: BIOL (Biological study)

(labeling solns. contg. amino acids and, for erythrocytes, with technetium-99)

RN 7772-99-8 HCAPLUS

CN Tin chloride ( $\text{SnCl}_2$ ) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

=&gt; d bib abs hitstr 131 32

L31 ANSWER 32 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1980:11168 HCAPLUS  
 DN 92:11168  
 TI Deterioration of stannous ion in radiopharmaceutical kits during storage  
 AU McBride, Martin H. D.; Shaw, Stanley M.; Kessler, Wayne V.  
 CS Diagn. Res. Dev. Dep., Squibb Inst. Med. Res., New Brunswick, NJ, USA  
 SO Am. J. Hosp. Pharm. (1979), 36(10), 1370-2  
 CODEN: AJHPA9; ISSN: 0002-9289  
 DT Journal  
 LA English  
 AB The deterioration of stannous ion (Sn<sup>2+</sup>) in inhouse-prepd. and com. radiopharmaceutical kits was studied. Sn<sup>2+</sup> content of 3 types of nonlyophilized, deoxygenated, aq. inhouse-prepd. kits [(DTPA), pyrophosphate and glucoheptonate] and of 3 com. prepd. kits (2 lyophilized pyrophosphate kits and one diphosphonate in sealed glass ampul kit) was measured by differential pulse polarog. Inhouse-prepd. kits were assayed initially and after storage for 6, 12, 24 and 48 days at 24, 5 and -18.degree.. Com. kits were assayed initially and after storage for 12, 24 and 48 days at 5 and 24.degree.. Of the inhouse-prepd. kits, Sn<sup>2+</sup> stability was greatest in the DTPA kits; even when stored at 24.degree. little deterioration was noted after 48 days. The inhouse-prepd. pyrophosphate and glucoheptonate kits showed substantial Sn<sup>2+</sup> loss at 24.degree. after 6 days; they generally fared better at 5.degree.; at -18.degree., deterioration was min. All 3 com. kits exhibited a high degree of Sn<sup>2+</sup> stability when stored for 48 days at 5 and 24.degree.. Freezer storage should be used, when possible, to insure max. stability of Sn<sup>2+</sup> in inhouse-prepd., nonlyophilized radiopharmaceutical kits. The com. products of nonlyophilization and of sealing the reagent in a sealed-glass ampul prolong Sn<sup>2+</sup> stability.  
 IT 22541-90-8, biological studies  
 RL: BIOL (Biological study)  
 (deterioration of, in radiopharmaceutical kits, storage effect on)  
 RN 22541-90-8 HCAPLUS  
 CN Tin, ion (Sn<sup>2+</sup>) (8CI, 9CI) (CA INDEX NAME)

Sn<sup>2+</sup>

=> d bib abs hitstr 131 33

L31 ANSWER 33 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
AN 1979:174762 HCAPLUS  
DN 90:174762  
TI Tin(II) determination in technetium-99m-labeled Sn-DMSA  
AU Liebscher, I.; Krogner, P.; Muenze, R.  
CS Bereich 3rd., DAW, Dresden, E. Ger.  
SO Radiochem. Radioanal. Lett. (1979), 37(6), 313-17  
CODEN: RRALAZ; ISSN: 0079-9483  
DT Journal  
LA German  
AB A polarog. method for the detn. of Sn(II) in the lyophilized  
Sn(II)-dimercaptosuccinic acid [Sn(II)-DMSA] [63130-02-9]-kit  
for the prodn. of 99mTc-DMSA is described. The error in the detn. of 2-4  
.times. 10-7M Sn(II) was .+-.6%.  
IT 22541-90-8, analysis  
RL: ANT (Analyte); ANST (Analytical study)  
(detn. of, in tin-dimercaptosuccinic acid complex by polarog.)  
RN 22541-90-8 HCAPLUS  
CN Tin, ion (Sn2+) (8CI, 9CI) (CA INDEX NAME)

Sn<sup>2+</sup>



=&gt; d bib abs hitstr 131 34

L31 ANSWER 34 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1978:41704 HCAPLUS  
 DN 88:41704  
 TI Scintigraphy agent containing technetium-99m-labeled colloidal stannous fluoride  
 IN Laidler, John Barry; Stewart, Maurice Alexander Alfred  
 PA Radiochemical Centre Ltd., Engl.  
 SO Ger. Offen., 11 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2710728	A1	19770929	DE 1977-2710728	19770311
	DE 2710728	C2	19821223		
	GB 1535847	A	19781213	GB 1976-11295	19770304
	US 4087516	A	19780502	US 1977-775643	19770307
	AU 7723131	A1	19780914	AU 1977-23131	19770310
	AU 513150	B2	19801120		
	JP 52143231	A2	19771129	JP 1977-30988	19770318
	JP 57015089	B4	19820329		
	FR 2344282	A1	19771014	FR 1977-8353	19770321
	FR 2344282	B1	19820305		

PRAI GB 1976-11295 19760319

AB Aseptically-packaged ~~99Tcm-labeled SnF2~~ colloid scintig. agents contain Sn(II) 0.75-750; Na+, K+ or NH4+ 50-7000; and F- 40-5000 .mu.g. For example, 1 g NaF was dissolved in 1 L N-purged sterile aq. injection soln., 125 mg SnF2 was added, and the soln. was filtered, placed in 10 mL vials, and sealed under N. The vials were sterilized by gamma-irradn. The materials were reconstituted for i.v. injection by injection of 1-10 mL of sterile, isotonic Na99TcmO4 soln. into the sealed vials. The activity of the 99Tc labeled soln. in each vial was .apprx.2-50 mCi. when the compns. were administered to mice 1-5, 11-15 and 21-5 wk after 99Tcm-labeling of the freeze-dried product, 92.9, 92.4 and 90.0%, resp., of the total radioactivity was localized in the liver and spleen, showing that the compns. have good storage stability.

IT 7783-47-3DP, technetium-99 complexes

RL: PREP (Preparation)  
 (colloidal, prepn. of, for scintig.)

RN 7783-47-3 HCAPLUS

CN Tin fluoride (SnF2) (8CI, 9CI) (CA INDEX NAME)

F-Sn-F

=&gt; d bib abs hitstr 131 35

L31 ANSWER 35 OF 37 HCAPLUS COPYRIGHT 2001 ACS

AN 1978:27834 HCAPLUS

DN 88:27834

TI Radiodiagnostic complexes employing fluorine-containing tin reducing agents

IN Hill, Brian K.; Kubik, Verna M.

PA Minnesota Mining and Mfg. Co., USA

SO U.S., 7 pp.

CODEN: USXXAM

DT Patent

LA English

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4054645	A	19771018	US 1976-717173	19760824
	DE 2737932	A1	19780302	DE 1977-2737932	19770823
	JP 53026325	A2	19780311	JP 1977-101025	19770823
	FR 2362622	A1	19780324	FR 1977-25881	19770824

PRAI US 1976-717173 19760824

AB Radiodiagnostic agents for mammals comprise a radiocomplex which is the reaction product of  $^{99}\text{Tcm}$ -pertechnetate ion, a diagnostic ligand, and a tin fluoride reducing agent. The tin fluorides have improved resistance to hydrolysis and oxidn. compared to previously used  $\text{SnCl}_2$ . Kits using  $\text{NaSnCl}_3$  were degraded faster than kits using  $\text{NaSnF}_3$  when exposed to accelerated heat aging. A radiodiagnostic soln. kit for imaging kidneys comprises a soln. of dimercaptosuccinic acid 90,  $\text{NaSnF}_3$  20 mg, and water to 100 mL. Two cc of this soln. was transferred to 10 mL vials and the kit lyophilized. The contents of each kit was dild. to 5.0 cc with N-saline and a vol. of  $^{99}\text{Tcm}$ -pertechnetate in saline, sufficient to provide 25-50  $\mu\text{Ci/mL}$ . One-tenth cc of the soln. was injected into mice for metabolic distribution of radioactivity detns. The agent showed good results for kidney imaging.

IT 7783-47-3

RL: BIOL (Biological study)

(as reducing agent, in radiodiagnostic kit)

RN 7783-47-3 HCAPLUS

CN Tin fluoride ( $\text{SnF}_2$ ) (8CI, 9CI) (CA INDEX NAME)

F- Sn- F

=&gt; d bib abs hitstr 131 36

L31 ANSWER 36 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1977:78691 HCAPLUS  
 DN 86:78691  
 TI Dispersion for preparing an injectable radiopharmaceutical scanning agent  
 IN Wolfangel, Robert G.  
 PA Byk-Mallinckrodt Chemische Produkte G.m.b.H., Ger.  
 SO Ger. Offen., 19 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2617895	A1	19761209	DE 1976-2617895	19760423
	DE 2617895	B2	19791031		
	DE 2617895	C3	19800710		
	US 4048296	A	19770913	US 1975-581315	19750527
	AT 350192	B	19790510	AT 1976-3036	19760426
	AT 7603036	A	19781015		
	DD 125606	C	19770504	DD 1976-192656	19760503
	GB 1530193	A	19781025	GB 1976-20273	19760517
	NL 7605274	A	19761130	NL 1976-5274	19760518
	JP 51144718	A2	19761213	JP 1976-56748	19760519
	JP 58022012	B4	19830506		
	BE 842251	A1	19760916	BE 1976-167356	19760526
	SE 7606036	A	19761128	SE 1976-6036	19760526
	SE 430303	B	19831107		
	SE 430303	C	19840216		
	FR 2312235	A1	19761224	FR 1976-16123	19760526
	FR 2312235	B1	19781117		
	SE 8006060	A	19800829	SE 1980-6060	19800829
	SE 436970	B	19850204		
	SE 436970	C	19850523		

PRAI US 1975-581315 19750527

AB Dispersions for the prepn. of injectable scintigraphy scanning agents comprised a Sn-S colloid and a stabilizer in an aq. buffer soln. with pH 3-5 at 25.degree.. For example, 15.4 ml Na thiosulfate (100 mg/ml) was added to 103 mg 5N HCl, and 92.8 ml SnCl<sub>2</sub> (10 mg/ml) was added after the reaction had ended. Glycine [56-40-6] (3465 mg 2N) and 387 ml 1N NaOH were added as a stabilizer and a buffer to adjust the pH to 3.2-3.5. The dispersion was dild. with H<sub>2</sub>O to 4544.2 ml, placed in 1 ml glass containers, and freeze-dried. Before use, the

IT solns. were reconstituted and labeled with 99mTc.  
 7772-99-8, biological studies  
 RL: BIOL (Biological study)  
 (reaction with sodium thiosulfate and hydrochloric acid)

RN 7772-99-8 HCAPLUS

CN Tin chloride (SnCl<sub>2</sub>) (8CI, 9CI) (CA INDEX NAME)

C1-Sn-C1

=&gt; d bib abs hitstr 131 37

L31 ANSWER 37 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1975:47769 HCAPLUS  
 DN 82:47769  
 TI Aqueous liquid for scintigraphic skeleton production  
 IN Laidler, John B.  
 PA Radiochemical Centre Ltd.  
 SO Ger. Offen., 18 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2412314	A1	19740919	DE 1974-2412314	19740314
	GB 1417518	A	19751210	GB 1973-12320	19740213
	US 3984531	A	19761005	US 1974-442902	19740215
PRAI	GB 1973-12320		19730314		

AB The title liq. contains complexes of  $^{99}\text{Tcm}$  [14133-76-7] with Sn [7440-31-5] and fluorophosphate suitable for use as bone-scanning agents. The use of monofluorophosphate eliminates the drawbacks, particularly the slow absorption of tripolyphosphate employed by Subramanian and McAfee (1971). The prepn. contains Sn ( $\text{SnF}_2$  [7783-47-3] or  $\text{SnCl}_2$  [7772-99-8]), a monofluorophosphate ( $\text{Na}_2\text{PO}_3\text{F}$  [10163-15-2]), the molar ratio of monofluorophosphate to Sn being 30:1 to 500:1; and an amt. of  $^{99}\text{Tcm}$  sufficient for forming a Tc-Sn-phosphate complex sufficient for skeletal imaging (after being injected into a mammal organism). Ready-made kits of the prepn. consist of ampuls contg. a freeze-dried soln. of 50-200 mg Na monofluorophosphate and 0.5-3.0 mg  $\text{SnF}_2$  to which (prior to injection) an adequate amt. of  $^{99}\text{Tcm}$  is added to ampuls as an aq. soln. of the pertechnate ion. In expts. with male Wistar rats, 35.5-48.0% of the injected dose was absorbed by the bones. In the cases of 126 human patients, injection of 10-15 mCi doses of  $^{99}\text{Tcm}$  gave good skeletal imaging without detrimental side effects.

IT 7772-99-8 7783-47-3  
 RL: BIOL (Biological study)  
 (bone scintigraphy with solns. contg. technetium 99m)  
 RN 7772-99-8 HCAPLUS  
 CN Tin chloride ( $\text{SnCl}_2$ ) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

RN 7783-47-3 HCAPLUS  
 CN Tin fluoride ( $\text{SnF}_2$ ) (8CI, 9CI) (CA INDEX NAME)

F-Sn-F

=&gt; d bib abs 134 1

L34 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2001 ACS  
AN 1994:306311 HCAPLUS  
DN 120:306311  
TI Oxidation of carbon monoxide on  $\text{LaMn}_{1-x}\text{Cu}_x\text{O}_3$  perovskite-type mixed oxides  
AU Yasuda, Hiroyuki; Fujiwara, Yoshiko; Mizuno, Noritaka; Misono, Makoto  
CS Fac. Eng., Univ. Tokyo, Tokyo, 113, Japan  
SO J. Chem. Soc., Faraday Trans. (1994), 90(8), 1183-9  
CODEN: JCFTEV; ISSN: 0956-5000  
DT Journal  
LA English  
AB Catalytic oxidn. of CO was investigated over a series of  $\text{LaMn}_{1-x}\text{Cu}_x\text{O}_3$  ( $x = 0-0.5$ ) and  $\text{La}_2\text{CuO}_4$  catalysts having perovskite-type and perovskite-related structures.  $\text{LaMn}_{1-x}\text{Cu}_x\text{O}_3$  catalysts were prep'd. by a freeze-drying method and showed uniform compns. The oxidn. states of Cu and Mn of the perovskite catalysts as well as several other properties relating to the reactivity of O, such as temp.-programmed desorption of O and CO, the reducibility of the catalysts, and the adsorption of CO and  $\text{CO}_2$  were measured.  $\text{La}_{1-y}\text{Sr}_y\text{MnO}_3$  ( $y = 0.2-1.0$ ) catalysts were also studied for comparison. A remarkable synergistic effect on the catalytic activities for oxidn. was found with Mn and Cu. The synergistic effect and the deactivated process are discussed based on the above properties. The effect was attributed to the combination of 2 functions, the activation of O by Mn oxide and that of CO by Cu ions, and the deactivation towards adsorption of  $\text{CO}_2$ .

=> d bib abs 134 2

L34 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1989:464855 HCAPLUS  
 DN 111:64855  
 TI Pronounced synergetic effect in the catalytic properties of  
 LaMn1-xCuxCuO3  
 AU Mizuno, Noritaka; Fujiwara, Yoshiko; Misono, Makoto  
 CS Fac. Eng., Univ. Tokyo, Tokyo, 113, Japan  
 SO J. Chem. Soc., Chem. Commun. (1989), (5), 316-18  
 CODEN: JCCCAT; ISSN: 0022-4936  
 DT Journal  
 LA English  
 AB A pronounced synergetic effect was found when LaMn1-xCuxO3 (x = 0.3-0.5)  
 was prepd. by a freeze-drying method from metal  
 acetates of each component. LaMn0.6Cu0.4O3 showed much higher catalytic  
 activity for the reactions of CO-O2 and NO-CO in comparison with LaMnO3  
 and La2CuO4.

=&gt; d bib abs 134 3

L34 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1977:127969 HCAPLUS  
 DN 86:127969  
 TI Preparation, structure, and selected catalytic properties of the lanthanum  
 manganese copper oxide (LaMn<sub>1-x</sub>Cu<sub>x</sub>O<sub>3-y</sub>) system  
 AU Gallagher, P. K.; Johnson, D. W., Jr.; Vogel, E. M.  
 CS Bell Lab., Murray Hill, N. J., USA  
 SO J. Am. Ceram. Soc. (1977), 60(1-2), 28-31  
 CODEN: JACTAW  
 DT Journal  
 LA English  
 AB Samples of LaMn<sub>1-x</sub>Cu<sub>x</sub>O<sub>3-y</sub> in the range 0 ≤ x ≤ 0.8 were  
 prep'd. from freeze-dried solns. of the nitrates.  
 Samples with x ≤ 0.6 were single-phase perovskites. At higher  
 values of x, the samples contained La<sub>2</sub>CuO<sub>4</sub> and CuO as well as the  
 perovskite phase. Samples of LaMn<sub>1-x</sub>Cu<sub>x</sub>O<sub>3-y</sub> supported on ceramic  
 monoliths or when mixed with powd. Al<sub>2</sub>O<sub>3</sub> exhibit catalytic activity for  
 the oxidn. of CO. Greatest activity is shown for 0.4 ≤ x ≤ 0.7.  
 Although the catalysts are severely poisoned by SO<sub>2</sub>, 2% H<sub>2</sub>O in the  
 gas stream causes only slight deactivation. Activities of other oxide  
 catalysts were also measured and compared. Rate consts. per unit surface  
 area at 200-400.degree.C follow the order Co<sub>3</sub>O<sub>4</sub> > Pt > LaMn<sub>1-x</sub>Cu<sub>x</sub>O<sub>3-y</sub> (0.4  
 ≤ x ≤ 0.7) > Cu chromite > La<sub>1-x</sub>Sr<sub>x</sub>MnO<sub>3</sub> > other  
 substituted LaMnO<sub>3</sub> materials, CuO, or La<sub>2</sub>CuO<sub>4</sub>. The perovskite catalyst  
 is more stable than Co<sub>3</sub>O<sub>4</sub> or Cu chromite when heated in 10% H<sub>2</sub> + 90% N<sub>2</sub>.

=&gt; d bib abs 134 4

L34 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2001 ACS  
AN 1976:185403 HCAPLUS  
DN 84:185403  
TI Preparation of high surface area substituted lanthanum manganate(III) catalysts  
AU Johnson, David W., Jr.; Gallagher, Patrick K.; Schrey, Frank; Rhodes, Warren W.  
CS Bell Lab., Murray Hill, N. J., USA  
SO Am. Ceram. Soc., Bull. (1976), 55(5), 520-3, 527  
CODEN: ACSBA7  
DT Journal  
LA English  
AB Oxide perovskites contg. transition metals and rare earth ions are catalysts for oxidn. and redn. for treatment of automotive exhaust. LaMnO<sub>3</sub>-type perovskite catalysts were prepd. with A site substitutions of Sr, Pb, K, and Ce; and with B site substitutions of Ni, Co, Li, and Mg from nitrate solns. by freeze drying, spray drying, and pptn. The catalysts were studied by using CO oxidn. as the test reaction. Free drying in some cases gave a single-phase perovskite at a lower temp. than the other methods. Substitution of Sr or K in LaMnO<sub>3</sub> gave catalysts with the highest conversion rates. Freeze dried La<sub>0.5</sub>Sn<sub>0.5</sub>MnO<sub>3</sub> had the highest surface area. Ni substitution for Mn gave active catalysts.



=&gt; d bib abs 134 5

L34 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2001 ACS  
AN 1975:448858 HCAPLUS  
DN 83:48858  
TI Activity of lanthanum strontium manganese oxide ( $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ )  
without platinum and lanthanum lead manganese oxide  
( $\text{La}_{0.7}\text{Pb}_{0.3}\text{MnO}_3$ ) with varying platinum contents for the catalytic  
oxidation of carbon monoxide  
AU Gallagher, P. K.; Johnson, D. W., Jr.; Remeika, J. P.; Schrey, F.;  
Trimble, L. E.; Vogel, E. M.; Voorhoeve, R. J. H.  
CS Bell Lab., Murray Hill, N. J., USA  
SO Mater. Res. Bull. (1975), 10(6), 529-38  
CODEN: MRBUAC  
DT Journal  
LA English  
AB Catalytic activities of  $\text{La}_{0.7}\text{Pb}_{0.3}\text{MnO}_3$  and  $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$  for the oxidn.  
of CO were detd. for unsupported samples and for samples supported on  
corrugated monoliths of cordierite. Pt free  $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$  was produced  
with a high surface area. It is stable to .gtoreq.1000.degree. and has  
been used to prep. supported devices having overall activities comparable  
to com. Pt catalysts. In contrast, the activity of  $\text{La}_{0.7}\text{Pb}_{0.3}\text{MnO}_3$  is in  
most samples markedly reduced at .gtoreq.400.degree.. The effects of Pt  
on the activity for CO oxidn. were studied. Single crystals of  
 $\text{La}_{0.7}\text{Pb}_{0.3}\text{MnO}_3$  having 0-5200 ppm of Pt were grown. Polycryst. samples  
having 0-2200 ppm of Pt were prepd., mainly by freeze-  
drying techniques. Samples with .ltoreq.570 ppm Pt were not  
significantly more active than the freshly prepd. perovskite surfaces  
without Pt showing that the activity of the perovskite is not directly  
connected with Pt. Samples with .gtoreq.1600 ppm Pt showed markedly  
enhanced activity and a higher activation energy similar to that of Pt.

=&gt; d bib abs 141 1

[L41] ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2001 ACS  
 AN 2000:719057 HCAPLUS  
 DN 133:365618  
 TI New sensor arrays and sampling systems for a modular electronic nose  
 AU Stetter, J. R.; Strathmann, S.; McEntegart, C.; Decastro, M.; Penrose, W.  
 R.  
 CS Chemistry Department, Illinois Institute of Technology, Chicago, IL,  
 60616, USA  
 SO Sens. Actuators, B (2000), B69(3), 410-419  
 CODEN: SABCEB; ISSN: 0925-4005  
 PB Elsevier Science S.A.  
 DT Journal  
 LA English  
 AB The electronic nose (EN) is an instrumented chem. sensor array with  
 pattern recognition. ENs with open architectures, such as the MOSES II  
 system, can be readily modified to accommodate a wide range of samples,  
 sensors, and methods. Three specific ways to make the EN more versatile  
 and improve the anal. capability were developed, installed on the MOSES II  
 system, and evaluated. First, the array of quartz crystal microbalance  
 (QMB) and SnO<sub>2</sub> heated metal oxide (MOX) sensors was expanded to include  
 amperometric gas sensors (AGS). This expands the chem. independence of  
 the sensor responses, increases the anal. chem. information produced by  
 the array, and improves the capability for qual. and quant. anal. with the  
 EN. Second, the authors have incorporated a membrane separator into the  
 sampling system which improves anal. capability esp. on sensors that are  
 sensitive to water vapor. Third, the authors have incorporated a heated  
 noble metal filament into the inlet that thermally decomps. or reacts  
 either gas, liq., or solid samples to generate gaseous mols. that are  
 derivs. of the sample and may be more/less reactive on the sensors. The  
 filament often produces improved sensitivity and selectivity for specific  
 analytes. Examples are presented of identification of cheeses and  
 explosives, and the detection of bacterial growth. The data illustrate  
 how each of these instrument modifications and newly developed methods can  
 improve the EN by adding either sensors with complementary information or  
 methods of sample pretreatment that enhance anal. performance.

RE.CNT 40  
 RE  
 (2) Barsan, N; Analytical Chemistry 1999, V71(13), P2512 HCAPLUS  
 (3) Brodbelt, J; Analytical Chemistry 1987, V59(3), P454 HCAPLUS  
 (4) Buttner, W; Analytica Chimica Acta 1997, P63 HCAPLUS  
 (5) Chang, S; Talanta 1993, V40(4), P461 HCAPLUS  
 (6) Dickinson, T; Analytical Chemistry 1997, V69, P3413 HCAPLUS  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs 141 2

L41 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2001 ACS

AN 1999:361125 HCAPLUS

DN 131:63067

TI Simultaneous Determination of Hydrogen, Methane, and Carbon Monoxide in Water by Gas Chromatography with a Semiconductor Detector

AU Ohta, Keiichi; Terai, Hisayoshi; Kimura, Ikuhiko; Tanaka, Katsuyuki

CS Institute for Hydrospheric-Atmospheric Sciences, Nagoya University, Nagoya, 464-8601, Japan

SO Anal. Chem. (1999), 71(14), 2697-2699

CODEN: ANCHAM; ISSN: 0003-2700

PB American Chemical Society

DT Journal

LA English

AB A portable gas chromatograph with a semiconductor detector (GC/SCD) was constructed and used in the field for measurements of H<sub>2</sub>, CH<sub>4</sub>, and CO in water. These gases were sepd. from water by the headspace method in a 100-mL glass bottle with 80 or 90 mL of a water sample. A 1- or 2-mL portion of the headspace was injected into the GC/SCD after complete equilibration between the gaseous and aq. phases. Hydrogen, CH<sub>4</sub>, and CO were sepd. from each other through a column packed with mol. sieve 13X-S and detected by the SnO<sub>2</sub> semiconductor sensor. Nitrogen and O<sub>2</sub> were used as a carrier gas and an additive gas for the sensor, resp. Using std. gases in the field studies, the SCD exhibited a linearity at least up to 140 pmol with low detection limits of 1.4, 0.55, and 0.26 pmol for H<sub>2</sub>, CH<sub>4</sub>, and CO, resp. The good anal. results obtained for water samples at marine, lake, and wetland sites showed the GC/SCD to be an efficient anal. system for these reduced gases in natural waters.

RE.CNT 22

RE

(1) Bullister, J; J Geophys Res 1982, V87, P2022 HCAPLUS

(2) Butler, J; Geochim Cosmochim Acta 1987, V51, P697 HCAPLUS

(3) Conrad, R; Advances in Microbial Ecology 1988, V10, P231 HCAPLUS

(4) Conrad, R; J Geophys Res 1982, V87, P8839 HCAPLUS

(7) Jones, R; Deep-Sea Res 1991, V38, P625 HCAPLUS

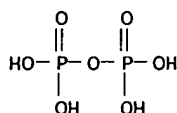
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs 141 3

L41 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2001 ACS  
AN 1991:160035 HCAPLUS  
DN 114:160035  
TI In vitro generation of carbon monoxide from organic molecules and  
synthetic metalloporphyrins mediated by light  
AU Vreman, Hendrik J.; Gillman, Michael J.; Downum, Kelsey R.; Stevenson,  
David K.  
CS Sch. Med., Stanford Univ., Stanford, CA, 94305, USA  
SO Dev. Pharmacol. Ther. (1990), 15(2), 112-24  
CODEN: DPTHDL; ISSN: 0379-8305  
DT Journal  
LA English  
AB Sn protoporphyrin (SnPP) and analogs are being studied as  
possible agents for the prevention of neonatal hyperbilirubinemia through  
inhibition of heme oxygenase. Because SnPP is a photosensitizer, its role  
was studied in the photogeneration of CO from org. compds. in vitro.  
Generation of CO occurred in the presence of 5 .mu.M SnPP and cool white  
light (19 .mu.W/cm2/nm or 29 W/m2) from SnPP alone, human serum albumin,  
glucose, histidine, ethanolamine, medium-chain triglycerides, NADPH, and  
human plasma. More detailed studies with human serum albumin and NADPH  
established that the photogeneration of CO is nearly linear with time and  
irradiance. It is curvilinear with respect to the SnPP concn. at the  
concns. tested, and it is dependent on the presence of O2 in the reactor  
headspace. Cool white light generated less CO from human serum  
albumin and NADPH than equidistantly placed blue and green phototherapy  
light sources. Comparison of SnPP with other metalloporphyrin heme  
oxygenase inhibitors indicates that Sn mesoporphyrin is most and  
Zn protoporphyrin least photoreactive.

=&gt; d bib abs hitstr 149 1

L49 ANSWER 1 OF 4 HCAPLUS/ COPYRIGHT 2001 ACS  
 AN 1999:277716 HCAPLUS  
 DN 131:2272  
 TI Modified pyrophosphate-99mTc kit for application in nuclear cardiology  
 AU Djokic, D.; Maksin, T.; Vucina, J.; Jankovic, D.  
 CS Laboratory Radioisotopes, Vinca Institute Nuclear Sciences, Belgrade,  
 11001, Yugoslavia  
 SO J. Radioanal. Nucl. Chem. (1998), 238(1-2), 155-157  
 CODEN: JRNCDE; ISSN: 0236-5731  
 PB Elsevier Science B.V.  
 DT Journal  
 LA English  
 AB A modified 99mTc(Sn)-pyrophosphate (PyP) kit for the application in  
 nuclear cardiol. (radioventriculog., angiocardiol., scintigraphy of blood  
 pool) was developed. Each vial contains 12 mg PyP (Na4P2O7), 4 mg  
 SnCl2.cntdot.2H2O, 2.5 mg gentisic acid, and 10 mg NaCl. The  
 reconstitution is performed by dissolving the lyophilized kit in  
 3 mL 0.9% NaCl. In comparison with the std. pyrophosphate kit for bone  
 scanning and detection of myocardial infarction, it contains an increased  
 amt. of Sn(II) so that the molar ratio ligand/reductant is lowered from 25  
 to 2.5. The radiochem. analyses showed that the radiochem. purity of the  
 labeled kit is high (> 90%) during three hours after addn. of  
 99mTc-activity. The shelf-life of the inactive freeze-  
 dried prepn. is .ltoreq.4 mo providing that it is kept in vacuum  
 and at appropriate temp. (2-8.degree.). The biodistribution studies  
 revealed increased accumulation in blood and low uptake by liver and  
 kidneys. It was concluded that the modified kit performs stable and  
 reproducible properties.  
 IT 54627-10-0  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (modified pyrophosphate-99mTc kit for application in nuclear cardiol.)  
 RN 54627-10-0 HCAPLUS  
 CN Diphosphoric acid, technetium-99Tc tin salt (9CI) (CA INDEX NAME)



● x Sn(x)

● x 99Tc(x)

RE.CNT 6

RE

- (1) Cvoric, J; J Radioanal Chem 1978, V44, P265 HCAPLUS
- (2) Djokic, D; Ann Meeting of Yug Nucl Med Soc 1995
- (3) Jones, A; Radiochim Acta 1995, V70/71, P289 HCAPLUS
- (4) Jovanovic, V; Eur J Nucl Med 1983, V8, P179 HCAPLUS
- (6) Subramanian, G; J Nucl Med 1975, V16, P744 HCAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs hitstr 149 2

L49 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2001 ACS

AN 1994:636880 HCAPLUS

DN 121:236880

TI Microwave dielectric ceramic compositions and their manufacture

IN Yokoyama, Yoshiaki; Ozeki, Hirobumi

PA Ngk Spark Plug Co, Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06215626	A2	19940805	JP 1993-23715	19930118
AB	The compns. consist of 100 wt. parts of (Zr <sub>1-x</sub> Sn <sub>x</sub> )TiO <sub>4</sub> (0.1 .ltoreq.x .ltoreq.0.3), and 0.1-1.0 wt. parts of MnO <sub>2</sub> . The compns. are manufd. by: mixing MnO <sub>2</sub> , ZrO <sub>2</sub> , SnO <sub>2</sub> , and TiO <sub>2</sub> with an appropriate compn., firing at 900-1100.degree.in atm., adding a desired org. binder and water, pulverizing, freeze-drying, granulating, molding, and firing at 1350-1425.degree.. The compns. have high sp. dielec. const., and are suitable for dielec. resonator, etc.				
IT	150902-94-6, Manganese tin titanium zirconium oxide				
	RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)				
	(microwave dielec. ceramic compns. with high sp. dielec. const. and their manuf.)				
RN	150902-94-6 HCAPLUS				
CN	Manganese tin titanium zirconium oxide (9CI) (CA INDEX NAME)				

Component	Ratio	Component Registry Number
O	x	17778-80-2
Zr	x	7440-67-7
Ti	x	7440-32-6
Sn	x	7440-31-5
Mn	x	7439-96-5

=&gt; d bib abs hitstr 149 3

L49 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2001 ACS

AN 1991:627237 HCAPLUS

DN 115:227237

TI Technetium-labeling of monoclonal antibodies with functionalized BATOs:  
2. TcCl(DMG)3CPITC (CPITC=carboxyphenylisothiocyanate) labeling of B72.3  
and NP-4 whole antibodies and NP-4 F(ab')<sub>2</sub>AU Linder, K. E.; Wen, M. D.; Nowotnik, D. P.; Ramalingam, K.; Sharkey, R.  
M.; Yost, F.; Narra, R. K.; Nunn, A. D.; Eckelman, W. C.

CS Bristol-Myers Squibb Pharm. Res. Inst., New Brunswick, NJ, 08903, USA

SO Bioconjugate Chem. (1991), 2(6), 407-14

CODEN: BCCHE5; ISSN: 1043-1802

DT Journal

LA English

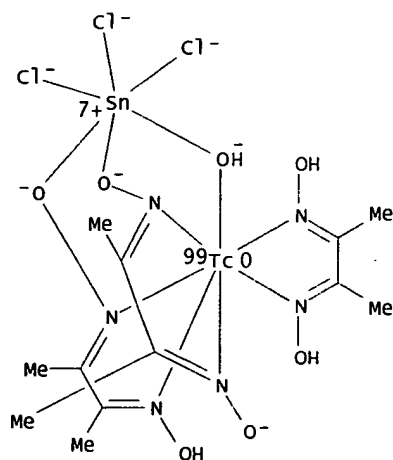
AB BATO (boronic acid adduct of technetium dioximes) complexes,  
TcCl(dioxime)<sub>3</sub>Br, were prep'd. in which the boron substituent (R) was the  
protein-reactive 2-carboxy-4-Ph isothiocyanate (CPITC). The <sup>99</sup>Tc  
complexes, where the dioxime was either dimethylglyoxime (DMG) or  
cyclohexanedione dioxime (CDO), were prep'd. and characterized. The <sup>99</sup>mTc  
complex TcCl(DMG)<sub>3</sub>CPITC was prep'd. from a freeze-dried  
kit and used to label B72.3 (anti-TAG.72) and NP-4 (anti-CEA) whole  
antibodies, and the NP-4 F(ab')<sub>2</sub> fragment. SDS-PAGE electrophoresis  
indicated that the labeling reagent was strongly bound to antibody. The  
labeled antibodies displayed high binding to affinity columns and good  
tumor uptake in GW39 tumor-bearing mice.

IT 127686-39-9

RL: RCT (Reactant)

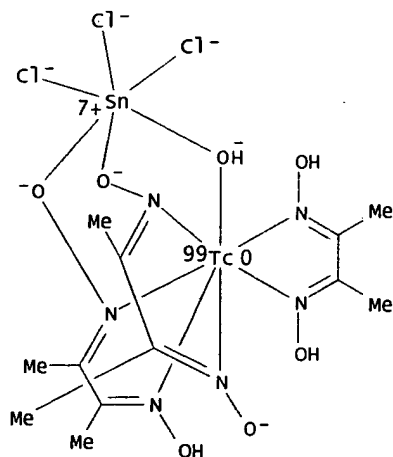
(reaction of, with boronic acid hydroxy carboxyphenylisothiocyanate)

RN 127686-39-9 HCAPLUS

CN Technetium-99Tc, [.mu.-[(2,3-butanedione dioximato)(1-)-N,N':O]][.mu.-  
[(2,3-butanedione dioximato)(2-)-N,N':O]](2,3-butanedione  
dioxime-N,N')-.mu.-hydroxy(trichlorotin)-, stereoisomer (9CI) (CA INDEX  
NAME)

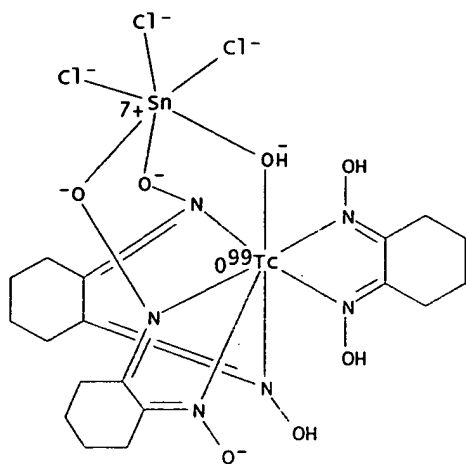
=&gt; d bib abs hitstr 149 4

L49 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1991:509420 HCAPLUS  
 DN 115:109420  
 TI Technetium labeling of monoclonal antibodies with functionalized BATOs. 1. TcCl(DMG)3PITC [phenyl isothiocyanate].  
 AU Linder, K. E.; Wen, M. D.; Nowotnik, D. P.; Malley, M. F.; Gougoutas, J. Z.; Nunn, A. D.; Eckelman, W. C.  
 CS Bristol-Myers Squibb Pharm. Res. Inst., New Brunswick, NJ, 08903, USA  
 SO Bioconjugate Chem. (1991), 2(3), 160-70  
 CODEN: BCCHE; ISSN: 1043-1802  
 DT Journal  
 LA English  
 AB BATO (boronic acid adduct of technetium dioximes) complexes, TcCl(dioxime)3BR, were prep'd. in which the boron substituent (R) was the protein-reactive m-Ph isothiocyanate (PITC). The 99TcCl(dioxime)3PITC complexes [dioxime = dimethylglyoxime (DMG) or cyclohexanedione dioxime (CDO)] were prep'd. from 99Tc(dioxime)3(.mu.-OH)SnCl3 and characterized. The x-ray crystal structure of 99mTcO4- in a process using a freeze-dried kit, either in a 1-step procedure or via 99mTcCl(dioxime)3. Initial labeling studies with 99mTcCl(dioxime)3PITC were performed on glycine and polylysine and, subsequently, on mouse IgG and the B72.3 monoclonal antibody. Covalent attachment of 99mTcCl(DMG)3PITC to B72.3 was demonstrated by SDS-PAGE electrophoresis. B72.3 labeled with 99mTcCl(DMG)3PITC displayed high binding to a TAG 72 affinity column and had a distribution in normal mice similar to that reported for I-labeled B72.3.  
 IT 127686-39-9 127686-40-2  
 RL: BIOL (Biological study)  
 (reaction of metastable, with isothiocyanatophenylboronic acid)  
 RN 127686-39-9 HCAPLUS  
 CN Technetium-99Tc, [.mu.-[(2,3-butanedione dioximato)(1-)-N,N':O]][.mu.-[(2,3-butanedione dioximato)(2-)-N,N':O]](2,3-butanedione dioxime-N,N')-.mu.-hydroxy(trichlorotin)-, stereoisomer (9CI) (CA INDEX NAME)



RN 127686-40-2 HCAPLUS  
 CN Technetium-99Tc, [.mu.-[(1,2-cyclohexanedione dioximato)(1-)-N,N':O]][.mu.-[(1,2-cyclohexanedione dioximato)(2-)-N,N':O]](1,2-cyclohexanedione dioxime-N,N')-.mu.-hydroxy(trichlorotin)-, stereoisomer (9CI) (CA INDEX NAME)





=&gt; d bib abs hitstr

LS9 ANSWER 1 OF 1 USPATFULL

AN 95:94697 USPATFULL

TI Biochemically active agents for chemical catalysis and cell receptor activation

IN Kossovsky, Nir, Los Angeles, CA, United States

Sponsler, Edward, Burbank, CA, United States

Gelman, Andrew, Los Angeles, CA, United States

Rajguru, Samir, Los Angeles, CA, United States

PA The Regents of the University of California, Oakland, CA, United States (U.S. corporation)

PI US 5460830 19951024

AI US 1993-145870 19931101 (8)

DCD 20100112

RLI Continuation-in-part of Ser. No. US 1993-199, filed on 4 Jan 1993, now patented, Pat. No. US 5334394 which is a continuation-in-part of Ser. No. US 1991-690601, filed on 24 Apr 1991, now patented, Pat. No. US 5178882 which is a continuation-in-part of Ser. No. US 1990-542255, filed on 22 Jun 1990, now patented, Pat. No. US 5219577

DT utility

EXNAM Primary Examiner: Page, Thurman K.; Assistant Examiner: Spear, James M.

LREP Poms, Smith, Lande &amp; Rose

CLMN Number of Claims: 10

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 1399

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A biologically active composition made up of core particles or surfaces which are coated with a layer which is designed to allow attachment of biochemically reactive pairs (BRP's) without denaturing the BRP to the microparticles. BRP's which may be attached include ligand-receptor pairs, enzyme-substrate pairs, drug-receptor pairs, catalyst-reactant pairs, toxin-ligand pairs, adsorbant-adsorbate pairs and adsorbant-adsorbate pairs.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 630-08-0, Carbon monoxide, biological studies

(Hb pair; biochem. active agents for chem. catalysis and cell receptor activation)

RN 630-08-0 USPATFULL

CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

-C≡O<sup>+</sup>

=&gt; d kwic

LS9 ANSWER 1 OF 1 USPATFULL

SUMM . . . A5 (4), Jul/Aug. 1987, pgs. 1375-1384; Hayashi, C., Physics

Today, Dec. 1987, pgs. 44-60; MRS Bulletin, Jan 1990, pgs. 16-47).

Tin oxide having a dispersed (in H.sub.2 O) aggregate particle size of about 140 nanometers is available commercially from Vacuum Metallurgical.

SUMM 3. lyophilization of the aqueous solvent/dispersant from the surface of the solid;

SUMM Lyophilization, as used in Step 3 above, means the removal of the aqueous phase from the surface film by a reduction. . . . and the removal of heat to cool the solid and the newly forming surface film may be modifications of the lyophilization process.

SUMM . . . the removal of the aqueous phase from the surface film by (a) a reduction in the ambient gas partial pressure (lyophilization) or (b) dialysis/ultrafiltration. Both the application of heat and the removal of heat to cool the solid and the newly forming surface film may be modifications of the lyophilization process.

SUMM . . . any of the conventional methods typically used for storing antigenic compounds or antibodies. For example, the coated particles may be freeze dried or stored as a suspension in a compatible solution. When used as a vaccine, the particles coated with a viral.

DETD Example 1. Preparation of nanocrystalline tin oxide microparticles: 1.5 to 2.0 mg of ultrafine (nanocrystalline) metal

SEARCHED BY SUSAN HANLEY 305-4053

Page 1

powder was placed in a 1.7 ml screw-cap microcentrifuge with. . . The ddH<sub>2</sub>O was filtered through a rinsed 0.45 micron filter-sterilizing unit or acrodisc (Gelman Scientific). The metal powder was tin oxide with a mean diameter (by photon correlation spectroscopy) of 140 nm. The mixture was vortexed for 30 seconds and. . .

DETD The coating was applied to the tin oxide particles by suspending the particles in a stock solution of cellobiose. The cellobiose stock solution was a 292 mM. . .

DETD Sufficient cellobiose stock solution was added to 150 microliters of ultrafine tin oxide dispersion so that the final concentration of the tin oxide was 1.00 percent (w/v) or 29.2 mM. A typical volume for preparation was 2.0 mls which was mixed four. . . the mobility of the particles (coated and uncoated) on a Coulter DELSA 440 doppler energy light scatter analyzer. The coated tin oxide particles exhibited a relatively low mobility compared to the non-coated tin oxide particles. Measurements were also taken at various dilute salt concentrations to ensure that the observations with respect to mobility. . .

DETD The same procedure was carried out in accordance with Example 1, except that ruthenium oxide microparticles were substituted for the tin oxide particles. The ruthenium oxide particles were obtained from Vacuum Metallurgical Company (Japan).

DETD Example 3. Preparation of the nanocrystalline silicon dioxide and tin oxide particles: Nanocrystalline silicon dioxide was acquired commercially from Advanced Refractory Technologies, Inc. (Buffalo, N.Y.) and tin oxide was acquired commercially from Vacuum Metallurgical Co. (Japan). The tin oxide particles were also prepared by reactive evaporations of tin in an argon-oxygen mixture and collected on cooled substrates. Nanocrystalline tin oxide was also synthesized by D.C. reactive Magnetron sputtering (inverted cathode). A 3" diameter target of high purity tin was sputtered in a high pressure gas mixture of argon and oxygen. The ultrafine particles formed in the gas phase. . . Scotch tape. CuK $\alpha$  radiation was used on a Norelco diffractometer. The spectrum obtained was compared with ASTM standard data of tin oxide. (Powder Diffraction File, Card #21-1250. Joint Committee on Powder Diffraction Standards, American Society for Testing and Materials, Philadelphia 1976.). . .

DETD . . . was established by the removal of 500 ul of the treated dispersion by N4MD analysis. The mean dispersion diameter was re-established at this step. The stability of the coated dispersion was determined by sequential measurements over a 24-hour period. The stability. . .

DETD Example 4. Preparation, isolation and surface adsorption of human serum transferrin proteins: Nanocrystalline tin oxide was synthesized by D.C. reactive Magnetron sputtering (inverted cathode). A 3" diameter target of high purity tin was sputtered in a high pressure gas mixture of argon and oxygen. The ultra-fine particles formed in the gas phase. . . Scotch tape. CuK $\alpha$  radiation was used on a Norelco diffractometer. The spectrum obtained was compared with ASTM standard data of tin oxide. The specimens for transmission electron microscopy and selected area diffraction were collected on a standard 3 mm diameter carbon. . .

DETD . . . was added to 1.0 ml of a 29.2 mM cellobiose-phosphate buffered saline solution in a dust free screw top glass vial and sonicated for 20 minutes at 22.5.degree.-35.degree. C. The submicron fraction was then isolated by pelleting macroparticulates by microcentrifugation at. . .

DETD Transmission electron micrographs showed that the D.C. magnetron sputtered tin oxide was composed of individual particles measuring 20-25 nm in diameter which aggregated into clusters measuring 80 to 120 nm. . . in diameter. By photon correlation spectroscopy, these same particles when dispersed in distilled water produced agglomerates measuring 154.+-.55 nm. The tin oxide particles were fully crystalline as characterized by electron and x-ray diffraction. Energy dispersive x-ray spectroscopy showed no other elements. . .

DETD By Doppler electrophoretic light scatter analysis, tin oxide exhibited a mean mobility of 2.177.+-.0.215 .mu.m-cm/V-s in aqueous solutions ranging from 10.8 to 20.3 .mu.M NaCl. Following cellobiose surface coating in a 1% solution, tin oxide exhibited a mean mobility of 1.544.+-.0.241 .mu.m-cm/V-s in aqueous solutions ranging from 0.0 to 21.0 .mu.M NaCl. The oxide. . .

DETD Following transferring binding, the crude tin oxide/cellobiose/protein conjugates measured 350.+-.84 nm by photon correlation spectroscopy and transmission electron microscopy. Vacuum dried dropped samples with low concentration. . .

DETD Example 5. Preparation and Characterization of Epstein-Barr Virus  
Decoys: Nanocrystalline tin oxide particles were synthesized  
by D.C. reactive Magnetron sputtering as previously described in Example  
1.

DETD Aliquots of the tin oxide powder weighing approximately 1.5 mg  
were initially suspended in 3.0 ml of 29.2 mM cellobiose solution in a  
dust free glass vial by liberal vortexing [Vortex Genie,  
Scientific Industries, Bohemia, N.Y.]. The resultant brownish cloudy  
suspension was then sonified at 175 W. . . .

DETD . . . . EBV extract was quickly added to a MD nominal molecular weight  
stir cell with 2.0 ml of the surface treated tin oxide  
dispersion prewarmed to 37.5.degree. C. The mixture was then slowly  
stirred while being incubated at 37.5.degree. C. for 2.0. . . .

DETD . . . . pH's ranging between 4.59 and 9.06 and corresponding  
conductivities ranging between 2.290 and 4.720 mS/cm were prepared.  
Aliquots of raw tin oxide, surface modified cellobiose covered  
tin oxide, synthesized EBV decoy, and whole EBV were dialyzed  
against each of the nine solutions and the mobilities of the. . . .

DETD . . . . labeled reaction products by transmission electron microscopy.  
The relative intensity of antibody binding was determined by counting  
the number of tin oxide based particles observed to have bound  
gold spheres (% positive) and then noting the number of gold spheres  
bound. . . .

DETD The ultrafine tin oxide particles measured 20-25 nm in  
diameter and formed aggregates measuring 80 to 120 nm in diameter by  
transmission electron microscopy. By photon correlation spectroscopy,  
these same particles when dispersed in distilled water produced  
agglomerates measuring 154.+-.55 nm. The tin oxide particles  
were fully crystalline as characterized by electron and x-ray  
diffraction. Energy dispersive x-ray spectroscopy showed no other  
elements. . . .

DETD . . . . the decoy and native EB virus retained virtually identical  
mobilities of approximately -1.4 .mu.m-cm/V-s throughout the pH range.  
Second, untreated tin oxide exhibited a mobility of  
approximately -1.0 .mu.m-cm/V-s at a pH of 4.5 which then rose rapidly  
to -3.0 .mu.m-cm/V-s at pH values of 5.0 and higher. Third, surface  
modified tin oxide treated with cellobiose retained a mobility  
of approximately -1.5 .mu.m-cm/V-s until it increased rapidly to -2.5  
um-cm/V-s at a. . . .

DETD . . . . 5) synthesized from a starting aliquot of 32 .mu.g of gp350 per  
injection. The last group received cellobiose coated in tin  
oxide dispersed in phosphate reaction buffer. Injections were free of  
adjuvant. Whole blood was removed using aseptic techniques via cardiac.  
. . . .

DETD . . . . the adsorbed antigen and by subtracting the baseline values  
recorded from the wells containing serum from the rabbits stimulated  
with tin oxide only.

DETD Serum collected from the 4 rabbits sensitized with tin oxide  
showed no increased anti-EBV activity over pre-immune serum at any of  
the three two week sampling intervals. The remaining. . . .

DETD . . . . carbohydrates, carbohydrate derivatives, and other  
macromolecules with carbohydrate-like components characterized by the  
abundance of --OH (hydroxyl) side groups; methods for  
lyophilization to yield molecular stabilizing surface films; and  
methods for immobilizing (a) member(s) of a BRP are described in the  
additional. . . .

DETD 15. Take a concentration measurement by removing 1.0 ml of the  
preparation from the cell and lyophilizing it down in a  
pre-weighed 1.7 ml Eppendorf tube. After lyophilization, take  
a mass measurement of the tube with its contents and subtract it away  
from the mass of the empty. . . .

DETD Incubation/Lyophilization.

DETD 3. The next day portion out the mixture into appropriately sized vessels  
for overnight lyophilization.

DETD 7. Take a concentration measurement by removing 1 ml of the suspension  
dehydrating it in a lyophilizer in a pre-weighed 1.7 ml  
Eppendorf tube, and massing.

DETD . . . . previously prepared 4 brushite tubes. Vortex each tube a few  
seconds to make certain that the contents are well dispersed.  
Lyophilize overnight [approx. 16 hrs] at the low drying rate  
setting. The next morning resuspend in 50 ml aliquots of sterile. . . .

DETD . . . . ml of 100 mM citrate to each of the 15 ml conicals and nutate  
for 30 minutes at room temperature. Lyophilize overnight  
[approx. 16 hrs] at the low drying rate setting. The next morning  
resuspend in 50 ml aliquots of sterile. . . .

DETD 1) Lyophilization: Two of the core preparations are  
lyophilized overnight on a Savant Speed vac (SVC100) under the

low drying rate setting for approximately 16 hours. The next morning the lyophilate is resuspended to 10 ml with HPLC grade sterile water. Three washes with water are performed by pelleting and resuspension.

DETD After insulin lyophilization, bring each of the preparations up to 10.0 ml with a water dispersion of 10% phosphatidyl choline, 10% phosphatidyl serine.

DETD . . . cellobiose was adsorbed onto the clean surface of the crystal by evenly applying 400 ul of 100 mM cellobiose and lyophilizing for ten minutes without applied heat or rotation (Savant SVC 100 lyophilizer, Wesbury, N.Y.). 100 ul of the 4% BSA solution was then added onto the cellobiose coating. Excess protein solution was.

IT 630-08-0, Carbon monoxide, biological studies  
(Hb pair; biochem. active agents for chem. catalysis and cell receptor activation)

=&gt; d bib abs hitstr 163 3

L63 ANSWER 3 OF 6 USPATFULL

AN 1999:27770 USPATFULL

TI Heterocyclic compounds for the treatment of CNS and cardiovascular disorders

IN TenBrink, Ruth E., Richland, MI, United States

Ennis, Michael D., Portage, MI, United States

Lahti, Robert A., Columbia, MD, United States

PA Pharmacia &amp; Upjohn Company, Kalamazoo, MI, United States (U.S. corporation)

PI US 5877317 19990302

WO 9518118 19950706

AI US 1996-663094 19960624 (8)

WO 1994-US13284 19941130

19960724 PCT 371 date  
19960724 PCT 102(e) date

RLI Continuation of Ser. No. US 1994-279974, filed on 25 Jul 1994, now abandoned which is a continuation-in-part of Ser. No. US 1993-175218, filed on 28 Dec 1993, now abandoned

DT Utility

EXNAM Primary Examiner: Bernhardt, Emily

LREP Stein, Bruce

CLMN Number of Claims: 22

ECL Exemplary Claim: 1,21,22

DRWN No Drawings

LN.CNT 4865

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Novel aromatic bicyclic amines of formula (I) ##STR1## are useful in treating central nervous system disorders and cardiac arrhythmias and cardiac fibrillation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=&gt; d kwic 163 3

L63 ANSWER 3 OF 6 USPATFULL

SUMM . . . acetal (Aldrich) or bromoacetaldehyde diethyl acetal (Aldrich) in the presence of a Lewis acids such as titanium tetrachloride, methanesulfonic acid, tin tetrachloride and boron trifluoride-etherate in solvents such as dichloromethane and nitromethane (together or separately) to give the non-cyclized halide (LXIII)..

SUMM . . . chloroacetone (Aldrich) or 4-chloro-2-butanone (Pfaltz and Bauer) in the presence of a Lewis acids such as titanium tetrachloride, methanesulfonic acid, tin tetrachloride or boron trifluoride-etherate in solvents such as dichloromethane and nitromethane (together or separately) to give the non-cyclized R.sub.1-1 halide.

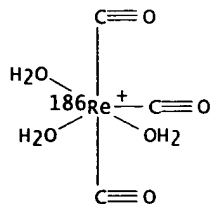
SUMM . . . alcohols (XLI, XLIV, XLV, XLIX, LI and LIII) in the presence of Lewis acids such as titanium tetrachloride, methanesulfonic acid, tin tetrachloride or boron trifluoride etherate in solvents such as dichloromethane or nitromethane or mixtures thereof to give the R.sub.10 -bicyclic.

DETD . . . 127, 103 mg, 0.25 mmol), palladium acetate (98%, 2.9 mg, 0.012 mmol) and 1,3-bis-diphenylphosphinopropane (97%, 6.4 mg, 0.015 mmol). Carbon monoxide atmosphere is established in the vial. To the reaction vessel is introduced via syringe DMF (0.62 ml), 1,1,1,3,3,3-hexamethyldisilazane (98%, 0.38 ml, 1.8 mmol), and diisopropylethylamine (0.087. . .

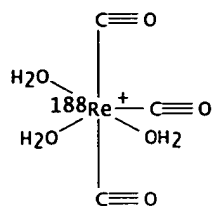
=&gt; d bib abs hitstr 140 1

L40 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1998:719299 HCAPLUS  
 DN 130:1842  
 TI Method for the preparation of facial metal tricarbonyl compounds and their use in the labeling of biologically active substrates  
 IN Alberto, Roger; Schibli, Roger; Egli, Andre  
 PA Mallinckrodt Medical, Inc., USA  
 SO PCT Int. Appl., 26 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9848848	A1	19981105	WO 1998-US7979	19980421
	W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, GW, HU, ID, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	EP 879606	A1	19981125	EP 1997-201232	19970425
	R: CH, LI, NL				
	AU 9871413	A1	19981124	AU 1998-71413	19980421
	BR 9809409	A	20000613	BR 1998-9409	19980421
	EP 1019095	A1	20000719	EP 1998-918501	19980421
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
	NO 9905160	A	19991213	NO 1999-5160	19991022
PRAI	EP 1997-201232		19970425		
	WO 1998-US7979		19980421		
AB	A method is disclosed for prepg. fac-[M(CO) <sub>3</sub> (OH <sub>2</sub> ) <sub>3</sub> ] <sup>+</sup> (M = Mn, <sup>99m</sup> Tc, <sup>186</sup> Re, <sup>188</sup> Re) (I) by reacting a metal in the permallate form with carbon monoxide and a reducing agent, characterized in that a mixt. of a base, a reducing agent sol. in water but not substantially decompd. by water, and optionally a stabilizing agent, is solved in a water-contg. solvent system contg. a soln. of the metal in the permanganate, pertechnetate or perrhenate form in the presence of carbon monoxide and optionally in the presence of a halide. Also disclosed are to a method of prepg. a labeled compd. with the aid of the compd. I, a method of direct prepn. of labeled compds., a method of labeling of substrates (e.g. amino acids, peptides, proteins, sugars, small receptor binding mols. and body cells) with the aid of compd. I, a kit for the prepn. of a labeling compn., and a kit for the prepn. of a diagnostic or therapeutic pharmaceutical compn.				
IT	215669-75-3P 215669-78-6P				
	RL: BAC (Biological activity or effector, except adverse); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (facial metal tricarbonyl compd. prepn. and use in labeling of biol. active substrates for diagnosis and therapy)				
RN	215669-75-3 HCAPLUS				
CN	Rhenium(1+)- <sup>186</sup> Re, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)				



RN 215669-78-6 HCAPLUS  
 CN Rhenium(1+)-<sup>188</sup>Re, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



RE.CNT 8

RE

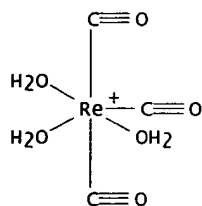
- (1) Bamford, C; J CHEM SOC DALTON TRANS 1978, 1, P4 HCAPLUS
- (2) Beck, W; J ORGANOMET CHEM 1980, V191(1), P73 HCAPLUS
- (3) Centre Nat Rech Scient; EP 0105785 A 1984 HCAPLUS
- (4) Egli, A; Hydrolysis of the Organometallic Aqua Ion fac-Triaquatricarbonylrhenium(I) Mechanism, pKa, and Formation Constants of the Polynuclear Hydrolysis Products 1997, 18, HCAPLUS
- (5) Egli, A; ORGANOMETALLICS 1997, V16(9), P1833 HCAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT



=&gt; d bib abs hitstr 140 2

L40 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1995:129891 HCAPLUS  
 DN 122:22508  
 TI Synthesis and reactivity of [NEt<sub>4</sub>]<sub>2</sub>[ReBr<sub>3</sub>(CO)<sub>3</sub>]. Formation and structural characterization of the clusters [NEt<sub>4</sub>][Re<sub>3</sub>(μ<sub>3</sub>-OH)(μ<sub>3</sub>-OH)<sub>3</sub>(CO)<sub>9</sub>] and [NEt<sub>4</sub>][Re<sub>2</sub>(μ<sub>3</sub>-OH)<sub>3</sub>(CO)<sub>6</sub>] by alkaline treatment  
 AU Alberto, Roger; Egli, Andre; Abram, Ulrich; Hegetschweiler, Kaspar; Gramlich, Volker; Schubiger, P. August  
 CS Div. Radiopharm., Paul Scherrer Inst., Villigen, CH-5232, Switz.  
 SO J. Chem. Soc., Dalton Trans. (1994), (19), 2815-20  
 CODEN: JCDTBI; ISSN: 0300-9246  
 DT Journal  
 LA English  
 AB The dianionic Re(I) complex [ReBr<sub>3</sub>(CO)<sub>3</sub>]<sup>2-</sup> was synthesized and characterized. This complex is an important starting material for compds. contg. the fac-Re(CO)<sub>3</sub> moiety since the three bromide ligands are very weakly bound. Particularly in coordinating solvents, the bromides are substituted by solvent mols. thus generating the strong 12e- Lewis acid [Re(H<sub>2</sub>O)<sub>3</sub>(CO)<sub>3</sub>]<sup>+</sup> (2). This formula was confirmed, particularly in H<sub>2</sub>O, by IR spectroscopic methods. 2 Is stable in aq. soln. even when exposed to air for weeks. It was titrated by NaOH solns. The change in pH was detected potentiometrically and found to occur very slowly, indicating a reaction other than protonation/deprotonation. Depending on the rate of titrn. and the total concn. of OH<sup>-</sup>, the two Re(I) hydroxo complexes [NEt<sub>4</sub>][Re<sub>3</sub>(μ<sub>3</sub>-OH)(μ<sub>3</sub>-OH)<sub>3</sub>(CO)<sub>9</sub>] and [NEt<sub>4</sub>][Re<sub>2</sub>(μ<sub>3</sub>-OH)<sub>3</sub>(CO)<sub>6</sub>] were isolated in good yield and structurally characterized. The former crystallizes in the orthorhombic space group Pnma with a 10.752(7), b 13.783(8) and c 18.254(12) Å. The skeletal framework is that of a cube lacking the Re(CO)<sub>3</sub> unit in one corner. The latter crystallizes in the orthorhombic space group P2mm with Z = 1, a 6.551(2), b 7.413(2) and c 12.084(2) Å. The two Re(CO)<sub>3</sub> moieties are bridged by three OH<sup>-</sup> ligands which create a mirror plane. A 2nd mirror plane is perpendicular to it along the Re-Re axis.  
 IT 159542-56-0P, fac-Triaquatricarbonylrhenium(1+)  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (formation and reaction with hydroxide)  
 RN 159542-56-0 HCAPLUS  
 CN Rhenium(1+), triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



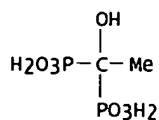
=&gt; d bib abs hitstr 126 9

L26 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1991:254002 HCAPLUS  
 DN 114:254002  
 TI Preparation of rhenium phosphonate therapeutic agents  
 IN Pipes, David W.  
 PA Mallinckrodt, Inc., USA  
 SO PCT Int. Appl., 17 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9013530	A1	19901115	WO 1990-US1323	19900312
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE				
	US 5021235	A	19910604	US 1989-346411	19890502
	CA 2064063	AA	19901103	CA 1990-2064063	19900312
	AU 9053554	A1	19901129	AU 1990-53554	19900312
	AU 646801	B2	19940310		
	EP 470965	A1	19920219	EP 1990-905853	19900312
	EP 470965	B1	19950628		
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE				
	JP 05500042	T2	19930114	JP 1990-505467	19900312
	JP 3080984	B2	20000828		
	ES 2076363	T3	19951101	ES 1990-905853	19900312
	US 5192526	A	19930309	US 1991-673000	19910321
PRAI	US 1989-346411		19890502		
	WO 1990-US1323		19900312		
AB	A stabilized radiopharmaceutical ready for use in diagnostic or therapeutic applications is prepd. for patients with cancer, heart diseases, etc. The preparatory method comprises (1) prepn. of 5 times. 10-6 - 2 times. 10-3M radioactive perrhenate soln., and (2) reducing and complexing the perrhenate with a ligand (0.01-0.15 M) which complexes with the perrhenate, and also with a reductant (0.005-0.02 M), wherein the pH of the resultant soln. is 1.5-5.5. Thus, 186Re-1-hydroxyethylidene diphosphonate (HEDP) with .1toreq.1% ReO4- was prepd. using Na2H2HEDP (a ligand), SnCl2.2H2O (a reductant), gentistic acid (an antioxidant), saline, ReO4- in EtOH, and 186Re.				
IT	7772-99-8, Stannous chloride, uses and miscellaneous RL: BIOL (Biological study) (as reductant, in pharmaceutical prepn. contg. radioactive perrhenate)				
RN	7772-99-8 HCAPLUS				
CN	Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)				

Cl-Sn-Cl

IT 2809-21-4 14000-31-8, Pyrophosphate 14378-26-8  
 , uses and miscellaneous 14998-63-1, uses and miscellaneous  
 15477-76-6, Phosphonate 112319-85-4, Imidodiphosphate  
 RL: BIOL (Biological study)  
 (radioactive pharmaceuticals manuf. from)  
 RN 2809-21-4 HCAPLUS  
 CN Phosphonic acid, (1-hydroxyethylidene)bis- (9CI) (CA INDEX NAME)



RN 14000-31-8 HCAPLUS  
 CN Diphosphate (9CI) (CA INDEX NAME)

2-O3P-O-PO32-

CEPERLEY 09/576,960

RN 14378-26-8 HCAPLUS  
CN Rhenium, isotope of mass 188 (8CI, 9CI) (CA INDEX NAME)

$^{188}\text{Re}$

RN 14998-63-1 HCAPLUS  
CN Rhenium, isotope of mass 186 (8CI, 9CI) (CA INDEX NAME)

$^{186}\text{Re}$

RN 15477-76-6 HCAPLUS  
CN Phosphonic acid, ion(2-) (8CI, 9CI) (CA INDEX NAME)



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

RN 112319-85-4 HCAPLUS  
CN Imidodiphosphate (9CI) (CA INDEX NAME)



=&gt; d bib abs hitstr 131 12

L31 ANSWER 12 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1998:249229 HCAPLUS  
 DN 128:299514  
 TI Formulation of 99mTc-Sn-EDTMP freeze-dried kit  
 for bone scanning  
 AU Mushtaq, A.  
 CS Radioisotope Production Group, Nuclear Chem. Div., Pakistan Inst. Nuclear  
 Sci. Technol., Islamabad, Pak.  
 SO Nucl. Med. Biol. (1998), 25(3), 313-315  
 CODEN: NMBIEO; ISSN: 0969-8051  
 PB Elsevier Science Inc.  
 DT Journal  
 LA English  
 AB The labeling of EDTMP with 99mTc was investigated. Stannous chloride was  
 used as the reducing agent for the redn. of 99mTc. Dependence of the  
 yield of 99mTc-EDTMP upon the concn. of reducing agent and ligand,  
 reaction time and pH were examd. Under optimum conditions, the yields of  
 99mTc-EDTMP were >99%. The stability of 99mTc-Sn-EDTMP was also studied.  
 IT 7772-99-8, Stannous chloride reactions  
 RL: RCT (Reactant)  
 (formulation of 99mTc-Sn-EDTMP freeze-dried  
 kit for bone scanning)  
 RN 7772-99-8 HCAPLUS  
 CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

=&gt; d bib abs hitstr 131 9

L31 ANSWER 9 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1999:277716 HCAPLUS  
 DN 131:2272  
 TI Modified pyrophosphate-99mTc kit for application in nuclear cardiology  
 AU Djokic, D.; Maksin, T.; Vucina, J.; Jankovic, D.  
 CS Laboratory Radioisotopes, Vinca Institute Nuclear Sciences, Belgrade, 11001, Yugoslavia  
 SO J. Radioanal. Nucl. Chem. (1998), 238(1-2), 155-157  
 CODEN: JRNCMD; ISSN: 0236-5731  
 PB Elsevier Science B.V.  
 DT Journal  
 LA English  
 AB A modified 99mTc(Sn)-pyrophosphate (PyP) kit for the application in nuclear cardiol. (radioventriculog., angiocardiol., scintigraphy of blood pool) was developed. Each vial contains 12 mg PyP (Na4P2O7), 4 mg SnCl2.cntdot.2H2O, 2.5 mg gentisic acid, and 10 mg NaCl. The reconstitution is performed by dissolving the lyophilized kit in 3 mL 0.9% NaCl. In comparison with the std. pyrophosphate kit for bone scanning and detection of myocardial infarction, it contains an increased amt. of Sn(II) so that the molar ratio ligand/reductant is lowered from 25 to 2.5. The radiochem. analyses showed that the radiochem. purity of the labeled kit is high (> 90%) during three hours after addn. of 99mTc-activity. The shelf-life of the inactive freeze-dried prepn. is .ltoreq.4 mo providing that it is kept in vacuum and at appropriate temp. (2-8.degree.). The biodistribution studies revealed increased accumulation in blood and low uptake by liver and kidneys. It was concluded that the modified kit performs stable and reproducible properties.  
 IT 10025-69-1, Stannous chloride dihydrate  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (modified pyrophosphate-99mTc kit for application in nuclear cardiol.)  
 RN 10025-69-1 HCAPLUS  
 CN Tin chloride (SnCl2), dihydrate (8CI, 9CI) (CA INDEX NAME)

Cl- Sn- Cl

●2 H2O

RE.CNT 6

RE

- (1) Cvoric, J; J Radioanal Chem 1978, V44, P265 HCAPLUS
- (2) Djokic, D; Ann Meeting of Yug Nucl Med Soc 1995
- (3) Jones, A; Radiochim Acta 1995, V70/71, P289 HCAPLUS
- (4) Jovanovic, V; Eur J Nucl Med 1983, V8, P179 HCAPLUS
- (6) Subramanian, G; J Nucl Med 1975, V16, P744 HCAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs hitstr 131 8

L31 ANSWER 8 OF 37 HCAPLUS COPYRIGHT 2001 ACS

AN 1999:371230 HCAPLUS

DN 131:174922

TI An improved kit formulation of a dopamine transporter imaging

agent: [Tc-99m]TRODAT-1

AU Choi, S. R.; Kung, M.-P.; Plossl, K.; Meegalla, S.; Kung, H. F.

CS Departments of Radiology, University of Pennsylvania, Philadelphia, PA, 19104, USA

SO Nucl. Med. Biol. (1999), 26(4), 461-466

CODEN: NMBIEO; ISSN: 0969-8051

PB Elsevier Science Inc.

DT Journal

LA English

AB Recently, [Tc-99m]TRODAT-1, the first Tc-99m-labeled tracer for imaging CNS dopamine transporters in humans, was reported. This tracer displayed excellent specific binding to dopamine transporters in the basal ganglia region of the brain, thus it is potentially useful for the diagnosis of deficit of dopamine transporters in neurodegenerative diseases, such as Parkinson's disease. Prepn. of [Tc-99m]TRODAT-1 was previously achieved by a multistep kit formulation. It is highly desirable to further improve the prepn. by developing a simplified one-vial formulation with a reduced amt. of TRODAT-1 ligand for routine clin. use. To achieve this goal, a series of studies to optimize labeling efficiency by varying a combination of factors (amt. of free ligand, reaction reagents, and reaction pH) was carried out. [Tc-99m]TRODAT-1 prepd. by this new kit formulation was evaluated by assessing the brain uptake and target (striatum) vs. nontarget (cerebellum) ratios in rats. Appropriate amts. of various ingredients for a one-vial kit formulation providing .gtoreq.90% radiolabeling yields were identified. The most consistent and reliable formulation contained 10 .mu.g of TRODAT-1 (a redn. of free ligand from 200 .mu.g to 10 .mu.g), 32 .mu.g of SnCl<sub>2</sub>, 10 mg of sodium glucoheptonate, and 840 .mu.g of disodium EDTA in one vial as a lyophilized kit. It is feasible to reconstitute the vial with [Tc-99m]pertechnetate (0.5-2 mL, .ltoreq.1110 MBq, 30 mCi), resulting in a final soln. with a pH value of 4.5-5.0. [Tc-99m]TRODAT-1, prepd. by this new kit, was stable at room temp. for 6 h. Biodistribution studies of this agent in rats with the new formulation showed similar regional brain distribution as compared with those obtained with the previous prepn. (high striatum-to-cerebellum ratio). In conclusion, using this lyophilized one-vial kit formulation, [Tc-99m]TRODAT-1 can be prepd. with greater than 90% radiochem. purity. This simplified kit will significantly improve the reliability of prepn. of this agent for routine clin. use.

IT 7772-99-8, Stannous chloride, reactions

RL: RCT (Reactant)

(effect of reaction conditions on [Tc-99m]TRODAT-1 yield using improved kit formulation)

RN 7772-99-8 HCAPLUS

CN Tin chloride (SnCl<sub>2</sub>) (8CI, 9CI) (CA INDEX NAME)

C1-Sn-C1

RE.CNT 24

RE

(1) Abi-Dargham, A; J Nucl Med 1996, V37, P1129 HCAPLUS

(2) Booij, J; Eur J Nucl Med 1998, V25, P24 HCAPLUS

(3) Fischman, A; Synapse 1998, V29, P128 HCAPLUS

(4) Fujita, M; Eur J Nucl Med 1997, V24, P403 HCAPLUS

(5) Goodman, M; J Med Chem 1994, V37, P1535 HCAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs hitstr 131 7

L31 ANSWER 7 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1999:700411 HCAPLUS  
 DN 132:83613  
 TI Development of a lyophilized kit formulation for  
 labeling of DNA probes with 99mTc  
 AU Hjelstuen, O. K.; Saetern, A. M.; Tonnesen, H. H.; Bremer, P. O.;  
 Verbruggen, A. M.  
 CS Department of Pharmaceutics, University of Oslo, Oslo, 0316, Norway  
 SO Int. J. Pharm. (1999), 190(2), 197-205  
 CODEN: IJPHDE; ISSN: 0378-5173  
 PB Elsevier Science B.V.  
 DT Journal  
 LA English  
 AB DNA fragments such as oligodeoxynucleotides (ODNs) are under investigation  
 for a possible utilization in nuclear medicine. Until now, expts. on  
 99mTc-labeled ODNs in vitro or in vivo have required the application of  
 time-consuming procedures to obtain and control the purity of the  
 radiolabeled compd. A lyophilized labeling kit would  
 ease and improve the reproducibility in further investigations with this  
 class of promising biomols.; therefore a study was initiated to evaluate  
 the suitability of conjugates of ODNs and a bifunctional chelating agent  
 to be part of lyophilized kit formulations. We report  
 here the development of the first kit for one-step labeling of  
 oligonucleotides with 99mTc. The formulation comprises 250-500 pmol  
 S-benzoyl-mercaptoacetyldiglycine (MAG2)-ODN phosphorothioate conjugate, 5  
 mg potassium sodium tartrate tetrahydrate and 100 .mu.g stannous chloride  
 dihydrate in a lyophilized kit. Labeling yields above  
 90% were reproducibly achieved after addn. of 0.1-1 GBq pertechnetate and  
 subsequent heating in a boiling water bath. Once formed, the  
 99mTc-MAG2-ODN complexes were stable for at least 24 h. The shelf life of  
 the kits is at least 10 wk when stored protected from light at  
 room temp., but even kits stored at 40.degree.C gave labeling  
 yields above 90% after 10 wk.  
 IT 7772-99-8, Stannous chloride, uses  
 RL: CAT (Catalyst use); USES (Uses)  
 (development of a lyophilized kit formulation for  
 labeling of DNA probes with 99mTc)  
 RN 7772-99-8 HCAPLUS  
 CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

RE.CNT 21  
 RE  
 (3) de Kieviet, W; J Nucl Med 1981, V22, P703 HCAPLUS  
 (4) Dewanjee, M; J Nucl Med 1994, V35, P1054 HCAPLUS  
 (6) Fischman, A; J Nucl Med 1993, V34, P2253 HCAPLUS  
 (7) Griffiths, G; Bioconjugate Chem 1992, V3, P91 HCAPLUS  
 (9) Hjelstuen, O; J Labelled Compd Radiopharm 1999, V42, P737 HCAPLUS  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs hitstr 131 6

L31 ANSWER 6 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1999:708421 HCAPLUS  
 DN 131:327612  
 TI Technetium-99m radiolabelled diethylene triamine pentaacetic acid diester  
 and process for the preparation of technetium-99m diethylene triamine  
 penta-acetic acid diester  
 IN Chatterjee, Mita; Sen, Karabi; Banerjee, Some Nath  
 PA Council of Scientific and Industrial Research, India  
 SO Eur. Pat. Appl., 9 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 953360	A1	19991103	EP 1998-250102	19980324
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AB	The present invention relates a technetium-99m radiolabeled diethylene triamine pentaacetic acid diester kit for the diagnosis of renal disorders. Accordingly, the present invention provides a technetium-99m radiolabeled diethylene triamine pentaacetic acid diester kit for the diagnosis of renal disorders wherein technetium-99m diethylene triamine pentaacetic acid di-Me ester has Rf value = zero in silica gel/acetone TLC system and Rf value = 1 in silica gel/acetonitrile water (1:1) TLC system and technetium-99m diethylene triamine pentaacetic acid di-Me ester movement is of the order of half of the distance as compared to the std. compd. (technetium-99m diethylene triamine pentaacetic acid) on conducting paper electrophoresis. The process for the prepn. of a technetium-99m radiolabeled diethylene triamine pentaacetic acid diester kit for the diagnosis of renal disorders comprises: (a) Adding appropriate amt. of stannous ion to a dil. aq. soln. of diethylene triamine pentaacetic diester prepd. by known methods (b) Keeping the resultant soln. obtained in step (a) in an evacuated rubber sealed injection vial flushed with nitrogen; (c) lyophilizing the said kit and storing the lyophilized product an obtained in step (b) at 4.degree.C; (d) radiolabelling the said lyophilized product with Tc-99m by allowing the kit to attain the room temp. before addn. of 99m TcO4; (e) shaking the kit vigorously to obtain the radiolabeled product available for use within a period of an hour.				
IT	7772-99-8, Stannous chloride, reactions 22541-90-8, Stannous ion, reactions RL: RCT (Reactant) (prepn. of 99mTc-labeled DTPA diester kits for renal scintigraphy)				
RN	7772-99-8 HCAPLUS				
CN	Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)				

Cl-Sn-Cl

RN 22541-90-8 HCAPLUS  
 CN Tin, ion (Sn2+) (8CI, 9CI) (CA INDEX NAME)

Sn2+

RE.CNT 4  
 RE  
 (1) Amersham Internationalplc; EP 0089143 A 1983 HCAPLUS  
 (2) Guilmette, R; JOURNAL OF PHARMACEUTICAL SCIENCES 1979, V68(2), P194 HCAPLUS  
 (3) Jurisson, S; CHEMICAL REVIEWS 1993, V93(3), P1137 HCAPLUS  
 (4) New Salutar Inc; WO 8602005 A 1986 HCAPLUS



=&gt; d bib abs hitstr 131 2

L31 ANSWER 2 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 2000:346652 HCAPLUS  
 DN 133:79197  
 TI A freeze dried kit for 99mTc(V)  
 dimercaptosuccinic acid  
 AU Mushtaq, A.; Pervez, Sh.; Haider, I.; Mansur, M. S.; Jehangir, M.  
 CS Radioisotope Production Group, Nuclear Chemistry Division, Pakistan  
 Institute of Nuclear Science and Technology, Islamabad, Pak.  
 SO J. Radioanal. Nucl. Chem. (2000), 243(3), 827-829  
 CODEN: JRNCMD; ISSN: 0236-5731  
 PB Kluwer Academic Publishers  
 DT Journal  
 LA English  
 AB 99mTc pentavalent dimercaptosuccinic acid [99mTc(V) DMSA], a useful agent  
 for imaging thyroid medullary carcinoma and other tumors can be reliably  
 prepd. by addn. of Na99mTcO4 to a freeze-dried mixt.  
 of DMSA and Sn (2:1 molar ratio). The radiochem. purity, stability and  
 animal bio-distribution behavior is similar to that of the agent made by  
 addn. of NaHCO3 to DMSA (III) renal imaging freeze-dried  
 kit.  
 IT 7772-99-8, Stannous chloride, reactions  
 RL: RCT (Reactant)  
 (freeze dried kit for 99mTc(V)  
 dimercaptosuccinic acid)  
 RN 7772-99-8 HCAPLUS  
 CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

RE.CNT 7

RE

- (1) Chauhan, U; Nucl Med Biol 1992, V19, P825 HCAPLUS
  - (2) Ikeda, I; Intern J Appl Radiation Isotopes 1976, V27, P681 HCAPLUS
  - (5) Washburn, L; Nucl Med Biol 1995, V22, P689 HCAPLUS
  - (6) Watkinson, J; J Nucl Med 1989, V30, P174 MEDLINE
  - (7) Westera, G; Intern J Appl Radiation Isotopes 1985, V36, P311 HCAPLUS
- ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs hitstr 131 3

L31 ANSWER 3 OF 37 HCAPLUS COPYRIGHT 2001 ACS  
 AN 2000:272374 HCAPLUS  
 Correction of: 1997:211786  
 DN 132:262169  
 Correction of: 126:274207  
 TI Study on the lyophilized product of 186Re(Sn)-HEDP kit  
 AU Bai, Hongsheng; Jin, Xiaohai; Wang, Fan; Du, Jin; Liu, Yuemin; Chen,  
 Daming; Xu, Hailin  
 CS China Institute of Atomic Energy, Beijing, 102413, Peop. Rep. China  
 SO Tongweisu (1996), 9(4), 207-212  
 CODEN: TONGEM; ISSN: 1000-7512  
 PB Yuanzineng Chubanshe  
 DT Journal  
 LA Chinese  
 AB The prepn. of the frozen and dried product of 186Re(Sn)-HEDP kit  
 was introduced, and the effective quantities of the components (HEDP,  
 vitamin C and SnCl<sub>2</sub>·2H<sub>2</sub>O) in the kit were detd. At the same  
 time, the effects of reaction time, temp. on the labeling efficiency and  
 animal distribution were systematically studied. The initial animal  
 expts. showed high uptake in the skeletal tissue and quick clearance in  
 the blood.  
 IT 10025-69-1, Stannous dichloride dihydrate  
 RL: MSC (Miscellaneous)  
 (lyophilized product of 186Re(Sn)-HEDP kit)  
 RN 10025-69-1 HCAPLUS  
 CN Tin chloride (SnCl<sub>2</sub>), dihydrate (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

●2 H<sub>2</sub>O

=&gt; d bib abs hitstr 131 1

L31 ANSWER 1 OF 37 HCAPLUS COPYRIGHT 2001 ACS

AN 2000:433275 HCAPLUS

DN 133:48872

TI Methods for radionuclide-labeling of biomolecules and kits  
utilizing the same

IN Gargan, Paul E.; Scheu, John D.

PA American Biogenetic Sciences, Inc., USA

SO U.S., 11 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6080384	A	20000627	US 1997-827013	19970325
AB	Novel methods for radiolabeling sulfhydryl group-bearing biomols., novel compns. useful for radiolabeling sulfhydryl group-bearing biomols., kits comprising such novel compns. and methods for imaging mammalian, preferably human, tissue employing radiolabeled biomols. are described. The methods, compns. and kits of the present invention are useful for labeling sulfhydryl group-bearing biomols. such as whole mol. proteins, protein fragments or peptides, in particular, monoclonal or polyclonal antibodies, and esp., antifibrin MH1 monoclonal antibody.				
IT	7772-99-8, Stannous chloride, biological studies 7783-47-3, Stannous fluoride 10031-24-0, Stannous bromide 10294-70-9, Stannous iodide 22541-90-8D, Stannous ion, salts, biological studies				
	RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); USES (Uses)				
	(methods, compns. and kits for radiolabeling sulfhydryl group-bearing biomols. for imaging)				
RN	7772-99-8 HCAPLUS				
CN	Tin chloride (SnCl <sub>2</sub> ) (8CI, 9CI) (CA INDEX NAME)				

Cl-Sn-Cl

RN 7783-47-3 HCAPLUS

CN Tin fluoride (SnF<sub>2</sub>) (8CI, 9CI) (CA INDEX NAME)

F-Sn-F

RN 10031-24-0 HCAPLUS

CN Tin bromide (SnBr<sub>2</sub>) (6CI, 8CI, 9CI) (CA INDEX NAME)

Br-Sn-Br

RN 10294-70-9 HCAPLUS

CN Tin iodide (SnI<sub>2</sub>) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

I-Sn-I

RN 22541-90-8 HCAPLUS

CN Tin, ion (Sn<sup>2+</sup>) (8CI, 9CI) (CA INDEX NAME)Sn<sup>2+</sup>

RE.CNT 55

RE

(1) Anon; WO 8503231 1985 HCAPLUS

(2) Anon; EP 0237150 1987 HCAPLUS

(3) Anon; WO 8704164 1987 HCAPLUS

(4) Anon; EP 0271806 1988 HCAPLUS

(5) Anon; WO 8807382 1988 HCAPLUS

CEPERLEY 09/576,960

ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d bib abs hitstr 130 1

L30 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2001 ACS

AN 1993:45762 HCAPLUS

DN 118:45762

TI Radiopharmaceutical bacteriostats

IN Flanagan, Richard J.; Tartaglia, Daniel

PA Merck Frosst Canada Inc., Can.

SO Eur. Pat. Appl., 37 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 508724	A1	19921014	EP 1992-303074	19920407
	EP 508724	B1	19960807		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, PT, SE				
	US 5093105	A	19920303	US 1991-682170	19910409
	US 5227152	A	19930713	US 1991-806572	19911212
	US 5306482	A	19940426	US 1992-841281	19920303
PRAI	US 1991-682170		19910409		
	US 1991-806572		19911212		
	US 1992-841281		19920303		

AB Benzalkonium chlorides and benzethonium chlorides are useful as bacteriostatic agents in radiopharmaceutical preps. contg. a <sup>99m</sup>Tc compd. or a radioactive iodine compd. A lyophilized radiopharmaceutical vial contained imidodiphosphonate 10, SnCl<sub>2</sub>.cntdot.2H<sub>2</sub>O 1, p-aminobenzoic acid 2mg, and benzalkonium chloride 25.mu.g. The vial was reconstituted with 500 mCi of pertechnetate <sup>99m</sup>Tc of normal saline; radiochromatog. tests showed <.perp.% free pertechnetate and <1% hydrolyzed pertechnetate at 7h post-reconstitution.

IT 87-74-1D, D-glycero-D-gulo-Heptonic acid, technetium-99 complexes

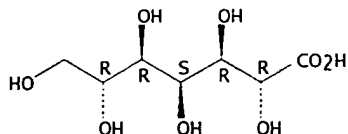
RL: BIOL (Biological study)

(metastable, radiopharmaceutical, bacteriostats for, benzalkonium chlorides and benzethonium chlorides as)

RN 87-74-1 HCAPLUS

CN D-glycero-D-gulo-Heptonic acid (6CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 7772-99-8P, Stannous chloride, preparation

RL: PREP (Preparation)

(technetium-<sup>99m</sup>-based radiopharmaceuticals contg., as reducing agent)

RN 7772-99-8 HCAPLUS

CN Tin chloride (SnCl<sub>2</sub>) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

=&gt; d bib abs hitstr 130 2

L30 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1986:438796 HCAPLUS  
 DN 105:38796  
 TI Ulcer detection  
 IN Kuperus, John  
 PA Medi Nuclear Corp., Inc., USA  
 SO U.S., 7 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4581221	A	19860408	US 1983-527188	19830829
AB	A suitable water-sol. carrier is reacted at a predetd. pH with 99mTc and the resulting reagent is combined with a known ulcer-specific compd. to produce an ulcer-detecting agent. When ingested, the ulcer-specific compd. selectively attaches through binding or pptn. to ulcerous tissue in the gastrointestinal tract. The unattached Tc-labeled material clears the stomach after a period of time, leaving the ulcer-specific compd. present only at the ulcer sites. The quantity of labeled ulcer-specific compd. is very small, so that clearing is accomplished rapidly and the ulcer sites are clearly defined. The 99mTc is detected in the digestive tract by conventional radioimaging procedures. Thus, an ulcer diagnosis kit contg. a protein carrier, a reducing agent, and ulcer-specific compd. was prepd. from SnCl <sub>2</sub> ·2H <sub>2</sub> O 10 mg, 25% human serum albumin 0.4 mL, 0.1N HCl 5 mL, 1.2N acetate buffer (pH 5.5) 2 mL, water 80 mL, and Na lactose sulfate (ulcer-specific compd.) 150 mg. The resulting soln. was purged with N <sub>2</sub> , dispensed in vials, lyophilized, and sealed. The sealed vials are opened at the site of use and mixed with Na <sup>99m</sup> TcO <sub>4</sub> . The admixt. may then be ingested by the patient.				
IT	7772-99-8, biological studies 7783-47-3 RL: ANST (Analytical study) (technetium-99-labeled ulcer-detecting agent contg., metastable)				
RN	7772-99-8 HCAPLUS				
CN	Tin chloride (SnCl <sub>2</sub> ) (8CI, 9CI) (CA INDEX NAME)				

Cl- Sn- Cl

RN 7783-47-3 HCAPLUS  
 CN Tin fluoride (SnF<sub>2</sub>) (8CI, 9CI) (CA INDEX NAME)

F- Sn- F

1st search

CEPERLEY 09/576,960

=> d his

(FILE 'HOME' ENTERED AT 16:40:39 ON 11 MAR 2001)

FILE 'HCAPLUS' ENTERED AT 16:40:49 ON 11 MAR 2001

E DYSZLEWSKI/AU  
L1 7 S E6-7  
L2 17 S PIPES D?/AU  
L3 151 S WEBB E?/AU  
L4 0 S L1 AND L2 AND L3  
L5 175 S L1-3  
L6 500 S ?AMINOPOLYCARBOXYLAT?  
L7 5979 S STANNOUS  
L8 161227 S TC OR RE  
L9 1 S L5 AND L6  
L10 3 S L5 AND L7  
L11 5 S L8 AND L5  
L12 35181 S ?TECHNETIUM? OR ?RHENIUM?  
L13 381741 S MANGANESE OR MN  
L14 15 S L5 AND L12-13  
L15 124306 S CARBONYL  
L16 16 S L9-11 OR L14  
L17 0 S L16 AND L15  
L18 3 S L7 AND L16  
L19 11 S L14 AND COMPLEX?  
L20 37844 S ?DENTATE?  
L21 3 S L20 AND L16  
L22 12 S L18-19 OR L21  
L23 4 S L16 NOT L22  
SELECT RN L22 1-12

FILE 'REGISTRY' ENTERED AT 16:49:41 ON 11 MAR 2001

L24 200 S E1-200  
L25 62 S E201-262

FILE 'HCAPLUS' ENTERED AT 16:50:30 ON 11 MAR 2001

L26 12 S L24-25 AND L22 12 cites of 262 opds displayed  
SELECT RN L23 1-4

FILE 'REGISTRY' ENTERED AT 16:55:18 ON 11 MAR 2001

L27 57 S E263-319

FILE 'HCAPLUS' ENTERED AT 16:55:33 ON 11 MAR 2001

L28 4 S L23 AND L27 4 cites of 57 cpds displayed

FILE 'REGISTRY' ENTERED AT 17:00:03 ON 11 MAR 2001

L29 STR 163932-31-8  
L30 8 S L29

FILE 'HCAPLUS' ENTERED AT 17:06:07 ON 11 MAR 2001

SAVE L16 CEP960I/A

FILE 'REGISTRY' ENTERED AT 17:21:44 ON 11 MAR 2001

L31 1 S 14333-13-2 →  $MnO_4$   
L32 1 S 87552-16-7 →  $186ReO_4$   
L33 1 S 87552-16-7  
L34 1 S 23288-61-1  
L35 1 S 163932-31-8

there does not seem to be a  $Mn(CO)_3(OH)_3$  cpd  
→ E C3H6O6MN/MF →  $99Tc(CO)_3(OH)_3$   
→ E C3H6O6RE/MF → various salts, etc of  $Re(CO)_3(OH)_3$   
→ E C3H6O6TC/MF →  $Tc(CO)_3(OH)_3$   
L36 3 S E3  
L37 2 S E3-4

FILE 'HCAPLUS' ENTERED AT 17:26:38 ON 11 MAR 2001

L38 17 S L35 OR L37 →  $Tc(CO)_3(OH)_3$  17 documents  
L39 5 S L36  
L40 2 S L39(L)PREP/RL → 2 cites  
L41 2 S L40 NOT L16  
L42 2028 S L31-35  
L43 1 S L41 AND L42  
L44 17 S L42 AND L38  
L45 9 S L38(L)PREP/RL  
L46 9 S L44 AND L45  
L47 8 S L46 NOT L16  
L48 8 S L44 NOT L46

SEARCHED BY SUSAN HANLEY 305-4053

Considered.  
06/29/01  
MEC

inventor  
search

all cites for the CO complex  
claims 1 & 8 are covered here since the  $Mn(CO)_3(OH)_3$  cpds are both product (cl 1) & reactant (cl 8)

L49 37 S L6 AND L12-13  
 L50 36 S L49 NOT L38  
 L51 36 S L50 NOT L16

FILE 'REGISTRY' ENTERED AT 17:44:49 ON 11 MAR 2001

L52 1 S EDTA/CN  
 L53 1 S DTPA/CN  
 L54 1 S DOTA/CN  
 L55 3 S IDA/CN  
 L56 0 S "GLYCINE, N-(CARBOXYMETHYL)"/CN  
 E "GLYCINE, N-(CARBOXYMETHYL)"/CN  
 L57 1 S E4  
 L58 2 S NTA/CN  
 L59 1 S "GLYCINE, N,N-BIS(CARBOXYMETHYL)"/CN

searching out amino carboxylate species (AC)

FILE 'HCAPLUS' ENTERED AT 17:47:08 ON 11 MAR 2001

L60 25057 S L52-54 OR L57 OR L59  
 L61 8 S L60 AND L51  
 L62 28 S L51 NOT L61  
 L63 0 S L62 AND (CARBON MONOXIDE OR CARBONYL)  
 SELECT RN L62 1-28  
 L64 27 S L6(L)L12-13  
 L65 33 S L64 OR L62  
 DELETE SELECT  
 SELECT RN L65 1-33

8 cites → looking for making Mn, Tc, Re complexes w/ AC, in general

more general search for claimed metals w/ any amino carboxylate species

FILE 'REGISTRY' ENTERED AT 17:55:08 ON 11 MAR 2001

L66 201 S E1-200  
 L67 200 S E201-400  
 L68 200 S E401-600  
 L69 164 S E601-764  
 L70 44 S L66-69 AND (TC OR MN OR RE)/ELS  
 L71 33 S L70 AND (N AND C AND O)/ELS  
 L72 11 S L70 NOT L71

33 of the cpds in L66-69 have claimed metals

amino carboxylate ligand

FILE 'HCAPLUS' ENTERED AT 17:58:50 ON 11 MAR 2001

L73 244 S L71  
 L74 19 S L73 AND L65  
 L75 14 S L65 NOT L74

very general - most complexes lack the C=O ligands